

THE RELATIONSHIP BETWEEN SELF-ASSESSED POLITICAL SKILL AND  
THE INDIVIDUAL DISPOSITIONAL FACTORS OF AGE AND GENDER

by

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## **ABSTRACT**

### **THE RELATIONSHIP BETWEEN SELF-ASSESSED POLITICAL SKILL AND INDIVIDUAL DISPOSITIONAL FACTORS**

An Abstract of the Dissertation by  
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**Problem:** While the impact of individual political skill on individual and organizational success is clear from the research, determining if proficiency in political skill is contingent upon the individual dispositional factors of age group and gender are less understood. If these dispositional factors contribute to individual proficiency in political skill, one would expect significant differences between these groups on a political skill assessment. The problem is the lack of research in the nature and significance of gender and age group on political skill

**Procedures:** This correlational study was conducted to identify differences in the self-assessment of political skill by gender and age group. This was accomplished by analyzing the data previously collected by Learn Associates LLC, with the use of the Political Skill Inventory (PSI) (Ferris et al., 2005). The PSI was offered to individuals mostly before participation in workshops, classes, and lectures on the topics of organizational politics and political skill with the purpose of providing feedback on group competency level in political skill. The data were not previously analyzed to determine correlations between these various demographic groups.

**Findings:**

- No significant mean differences were indicated for the main effect of gender for the four dimensions of political skill or for political skill overall.
- No significant differences were indicated for the main effect of age group for the four dimensions of political skill or for political skill overall.
- A Tukey-Kramer multiple comparison test detected a difference between age group 1 and age group 3 in apparent sincerity with age group 3 having a greater mean score. However, the effect size was small.
- No significant differences were identified for the gender factor within each age group.



- Small to medium effects were identified in favor of males in age group 2 for networking ability, networking ability excluding outlier and overall political skill.
- Small to medium effects were identified in favor of females in age group 3 for networking ability and overall political skill.
- A medium to large effect was identified in favor of females in age group 3 for networking ability excluding outlier.
- No significant differences were identified for the age group factor within each gender category.
- A small to medium age group effect was identified for males in overall political skill.
- Medium age group effects were identified for males in networking ability and networking ability excluding outlier.
- Small age group effects were identified for females in networking and overall political skill.
- A small to medium age group effect was identified for females in networking ability excluding outlier.

#### Conclusions:

1. Males and females are of equal ability in political skill.
2. Age group may play a role in one's political skill. Specifically, differences exist between younger workers (i.e., 18 to 30 years of age) and older workers (i.e., 48 to 66 years of age) in the apparent sincerity dimension.
3. Males and females possess different levels of proficiency in political skill at different stages in their careers.

#### Recommendations:

1. It is recommended that similar studies on political skill be undertaken examining other dispositional factors such as race, national origin, etc.
2. It is recommended that similar studies on political skill be undertaken examining situational factors such as organization, occupation, careers level, education level, income, etc.
3. It is recommended that the present study be replicated utilizing a larger sample size.
4. It is recommended that future studies be conducted determine the relative importance of each of the 4 political skill dimensions on individual and organizational success.

## CHAPTER 1

### INTRODUCTION

Research on the construct of organizational politics began roughly thirty-five years ago with the work of Jeffrey Pfeffer (1981) and Henry Mintzberg (1983). Each identified organizations as inherently political arenas where individuals must possess skill in political behaviors in order to be successful. Allen, Madison, Porter, Renwick, and Mayes (1979) published the first seminal study on the tactics and characteristics of those active in organizational politics. Since that time, research in this domain has primarily focused on two areas: (1) The perceptions of individuals concerning how politics effects organizations and the individuals functioning within organizations (Ferris, Russ, & Fandt, 1989; Ferris, Adams, Kolodinsky, Hochwarter, & Ammeter, 2002; Kacmar & Baron, 1999; Rosen, Levy, & Hall, 2006;) and (2) the skills, tactics, and characteristics individuals possess to cope with organizational politics (Brandon & Seldman, 2004; Ferris et al., 2005).

The definitions of organizational politics have varied greatly over the years. Pfeffer (1981) defined organizational politics as "...activities taken within an organization to acquire, develop, and use power and other resources to obtain one's preferred outcomes in a situation in which there is uncertainty or dissensus about choices" (p. 7). For Mintzberg (1983) organizational politics has a more negative hue "Individual or group behavior that is informal, ostensibly parochial, typically divisive, and above all, in a technical sense' illegitimate—sanctioned not by formal authority, accepted ideology, or certified expertise" (p. 172). In

contrast, Bolman and Deal (2003) view organizational politics as "...the realistic process of making decisions and allocating resources in a context of scarcity and divergent interests" (p. 190).

How one handles oneself within political organizations is defined as political skill. Political skill is "The ability to effectively understand individuals and situations at work, and uses this knowledge in ways that will benefit one's personal goals and objectives" (Ahern, Ferris, Hochwarter, Douglas, & Ammeter, 2004, p.11). Each person has a unique level of skill and how quickly or how well they accomplish individual and organizational goals are partially based on these individual characteristics.

There are a plethora of political skill styles and numerous political skill inventories to assist individuals in determining their level of ability. According to Brandon and Seldman (2004) there exist three political skill levels: proficient, capable, and vulnerable. For Reardon (2000) there are four styles: purist, team player, street fighter, and maneuverer. DeLuca (1999) identifies nine distinct styles: protector, cynic, fatalist, spectator, speculator, advisor, Machiavellian, responsible, and leader. Organizations can also possess certain political cultural styles. Reardon (2000) defined these various styles on a continuum from minimal to pathological and suggested that an individual's political style must match the organization's culture in order to be successful.

Organizations are often characterized as political arenas (Mintzberg, 1985) exemplified by the obstacles of manipulation (DuBrin, 1990), conflictual maneuvering (Murray & Gandz, 2001), illegitimate tactics (Reardon, 2000),

sabotage (Brandon & Seldman, 2004), backstabbing (Cardillo, 2007), and opportunism and game playing (Dhar, 2009). DeLuca (1999) noted several other consequences of organizational politics including destructiveness, covert deal making, deceitfulness, back-room decisions, influence attempts, and hidden agendas. While many hold this negative view of organizational politics, some believe political skill is neutral or support a positive influence if used in an ethical way. For Reardon (2005) this involves developing a political compass.

Individuals within an organization inherently face finite resources that limit success. These include human resources, raw materials, and capital. It is the struggle against these obstacles which create the need for political skill as Bolman and Deal (2003) note, “Political dynamics are inevitable under conditions most managers face every day: ambiguity, diversity, and scarcity” (p. 211). In fact, being astute in political skill is essential to individual and leader success. Bolman and Deal continue, “Despite the low image of organizational politics in the minds of many managers, political savvy appears to be the primary determinant of success in certain jobs” (p. 319). Reardon (2005) concurs, “You cannot afford to be apolitical at work if you have any aspirations for advancement” (p. 1).

The importance of understanding organizational politics and being politically skilled is clear as Beeman and Sharkey (1987) note, “Any manager-- but particularly a new manager—needs to understand how corporate politics work” (p. 26). A study of 1,000 employees fired from 35 different jobs found a lack of getting along with their managers or peers, a lack of values alignment with

their organizations, or a lack of political skill was the reason 75% of respondents reported as the reason for being fired (Bhasin, 1995).

### **Political Skill Inventory**

Several instruments exist to assess individual political skill including those by Reardon (2000), Brandon & Seldman (2004), DuBrin (1990), Clarke (1999), and McIntyre (2005). An evaluation of the instruments indicate that most are provided within the text of popular business literature, designed without the use of empirical data and contain no formal method for collecting results for further academic analysis. Often presented as self-help guides, these evaluation items are untested for validity and fail to provide a comprehensive analysis of one's political skill.

Unlike these, an instrument first developed by Ferris et al. (1999), and revised and validated by Ferris et al. (2005), the Political Skill Inventory (PSI) was designed as a formal method for measuring one's skill in the four dimensions of political skill and overall political skill. The PSI consists of eighteen items and requests participants to indicate to what extent they agree or disagree with each statement about themselves in the workplace using a 1 (strongly disagree) to 7 (strongly agree) Likert scale. A sample item was "I am good at getting people to like me" (see Appendix A).

Each PSI item relates to one of the four dimensions of political skill (i.e., social astuteness, interpersonal influence, networking ability, and apparent sincerity). These four dimensions of political skill and overall political skill are defined later in this chapter. Since 2005, the PSI has been the primary

instrument utilized by researchers to measure individual political skill. Research published using the PSI include the effect of political skill on social stress (Harvey, Harris, Harris, & Wheeler, 2007), career success implications of political skill (Todd, Harris, Harris, & Wheeler, 2009), the importance of political skill for job performance (Andrews, Kacmar, & Harris, 2009), political skill as a moderator of the trait sincerity-task performance relationship (Meurs, Perrewe, & Ferris, 2011), the moderating role of political skill on creativity and entrepreneurial intentions (Phipps, 2012), and political skill inventory fit for personnel selection (Blickle & Schnitzler, 2010).

Organizational politics is present in every organization to different degrees (Ferris, Adams, Kolodinsky, Hochwarter, & Ammeter, 2002), but specifically in environments where participants are highly competitive or there are uncertain performance or reward systems (Beeman & Sharkey, 1987). Organizational politics is a fact of life within organizations (Ferris & Kacmar, 1992), always present in organizational life (Hathaway, 1992), and in some respects necessary to organizational life (Judge & Bretz, 1994; Pinto, 1997).

Having political skill can have positive effects for individuals. Todd et al. (2009) reported in their study of 2,000 randomly chosen alumni from a private Midwestern university in the United States that those individuals higher in political skill experienced more positive career outcomes. These outcomes include: total compensation, total promotions, career satisfaction, life satisfaction, and perceived external mobility. Additional benefits of political skill are also noted. Conner (2006) asserts that political skill allows those individuals with less

authority the means for promoting and accomplishing their goals; while Bacharach and Lawler (1998) postulate the need for political skill as a means for recognition and advancement. Hochwarter and Thompson (2010) argue the necessity of political skill for healthy employee functioning and Ng, Eby, Sorensen and Feldman (2005) address the relationship between political skill and both salary and career satisfaction.

### **Statement of Problem**

While the impact of individual political skill is clear, determining if proficiency in political skill is contingent upon individual dispositional factors (e.g., age group or gender) are less understood. Todd et al. (2009) posit the likelihood that one's political skill development is dependent upon the dispositional characteristic of age, "...it is possible that certain variables may serve as antecedents of political skill development. That is, as employees become older and gain experience working, they may develop or sharpen their political skill" (p. 199).

Considerable debate exists regarding the political skill of women because they are often perceived as being at a disadvantage due to the workplace gender discrimination,

However, if political skill reflects to some degree the tacit knowledge acquired over time through experience and through guidance of mentors, women may be placed at a competitive disadvantage to white males in never really learning the ropes nor realizing the positioning and visibility

benefits of being introduced into new and influential networks. (Perrewe & Nelson, 2004, p. 366)

If one's gender and/or age are contributing factors to individual proficiency in political skill, one might expect a significant difference between these groups on a political skills assessment. The problem is the lack of research in the nature and significance of gender and age on political skill "The nature and significance of gender differences in this domain [political skill] are not well understood, either by researchers or, it seems, by managers" (Buchanan, 2008, p. 62). "Therefore, future research should attempt to more accurately model the role that gender and age may play in the possession and development of political skill by applying theory and analysis that can capture the variability in behavior across a life span" (Treadway et al., 2004, p. 509).

### **Purpose of Research**

The purpose of this study was to determine the extent the dispositional factors of age and gender have on the self-assessments of political skill.

### **Research Questions**

The following research questions guided this study:

Research Question 1: Do differences exist between males and females in their self-assessments of political skill?

Research Question 2: Do differences exist among members of the three age groups in their self-assessments of political skill?

Research Question 3: Do differences exist between males and females participants within each age group in their self-assessments of political skill?



Research Question 4: Do differences exist among participants of the three age groups within each gender category in their self-assessments of political skill?

### **Significance of Study**

This study will determine the impact of dispositional factors on an individual's proficiency in political skill, and will add to the significant body of knowledge on political skill using the PSI. If differences are determined, organizations can use this knowledge to target training programs to those groups identified as low in political skill (Ferris, Davidson, and Perrewe, 2005; Todd et al., 2009). Such programs would have a myriad of positive effects for both the individuals and the organizations in which they work including compensation (Kipnis & Schmidt, 1988), promotions (Todd, et al., 2009), life satisfaction (Todd, et al., 2009), external job mobility (Todd, et al., 2009), career satisfaction (Judge & Bretz, 1994; Seibert, Kraimer & Crant, 2001; Todd et al., 2009), reduced role overload and strained relationships (Perrewe et al., 2005), leader effectiveness (Douglas & Ammeter, 2004), and team performance (Ahern et al., 2004).

The present study may also provide data for use by organizational managers to assess political skill as a tool for selection. In today's marketplace, the importance of selecting the right candidate for positions cannot be underestimated. The political skill self-assessment may provide one way to help identify candidates who have high political skill and thus a higher probability for success in the workplace. This study would also fill a void in the body of knowledge, which has caused many researchers to ask for further study into the

effects of dispositional factors on political skill (Todd, et al., 2009; Buchanan, 2008; Treadway et al., 2004).

### **Summary of Methodology**

The present study was an analysis of data to identify similarities and differences in the self-assessment of organizational political skill to generalize by gender and age group. This was accomplished by analyzing the data previously collected by Learn Associates, LLC using the Political Skills Inventory (PSI) created by Ferris et al. (2005). This instrument was given mostly to participants prior to workshops held by Learn Associates, LLC to provide information on the perceived skill level of participants in the four organizational political skill dimensions and political skill in general. The complete dataset was not been previously analyzed in totality to determine correlations between these various dispositional groups. Further details regarding the methods of this study are provided in the Chapter 3.

### **Research Limitations**

The following potential limitations are of note: First, the data were collected mostly from workshop participants in mainly the financial services industry and were not random. For these reasons, the data may not be representative of employee in other industries or of employees throughout the United States. Second, the data for the study were collected mostly from those who chose to take a particular workshop on organizational political skill. For this reason, the data may not be representative of all employees. Third, the data were collected using a self-reporting instrument, thus a concern for method

variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Fourth, the sample size was smaller than the researcher would have liked, but is in-line with previous norms of research on political skill (Westbrook, Veale, & Karnes, 2013) and considerations of power. Lastly, there is a potential for a moderating effects, which were not tested for in the present study. For example, participants' race is a dispositional factor which may or may not influence political skill, but was not tested.

### **Definitions**

Organizational politics: "...activities taken within an organization to acquire, develop, and use power and other resources to obtain one's preferred outcomes in a situation in which there is uncertainty or dissensus about choices" (Pfeffer, 1981, p. 7).

Political skill: "The ability to effectively understand others at work and to use such knowledge to influence others to act in ways that enhance one's personal or organizational objectives" (Ahern et al., 2004, p. 311).

Social astuteness: "Individuals possessing political skill are astute observers and are keenly attuned to diverse social situations. They comprehend social interactions and accurately interpret their own behavior, as well as that of others, in social settings. They have strong powers of discernment and high self-awareness" (Ferris et al., 2005, p. 129).

Interpersonal influence: "Politically skilled individuals have a subtle and convincing personal style that exerts a powerful influence on those around them. Individuals high in interpersonal influence nonetheless are capable of

appropriately adapting and calibrating their behavior to each situation in order to elicit particular responses from others” (Ferris et al., 2005, p. 129).

Networking ability: “Individuals with strong political skill are adept at developing and using diverse networks of people. People in these networks tend to hold assets seen as valuable and necessary for successful personal and organizational functioning” (Ferris et al., 2005, p. 129).

Apparent sincerity: “Politically skilled individuals appear to others as possessing high levels of integrity, authenticity, sincerity, and genuineness. They are, or appear to be, honest, open, and forthright. This dimension of political skill strikes at the very heart of whether influence attempt will be successful, because it focuses on the perceived intentions (i.e., as assessed by the target of influence) of the behavior exhibited (i.e., by the actor)” (Ferris et al., 2005, p. 129).

Age Groups: For the purpose of this study the following age groups as discussed by Tolbize (2008) were utilized. Although these groups are commonly referred to by their generational name (e.g., Baby Boomer, Generation X, Generation Y), the purpose of the study was not to compare and contrast generational differences and political skill.

- Age Group 1: 18 to 30 years of age.
- Age Group 2: 31 to 47 years of age.
- Age Group 3: 48 to 66 years of age.

Gender: For the purpose of this study, participants were asked their gender (i.e., Male or Female) without regard to sexual orientation or preference.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Research in organizational politics has focused primarily on the tactics, strategies, impact, and perceptions of organizational politics without much consideration for the characteristics that enable one to attain success in a political environment. Individuals who possess such qualities are often referred to as politically savvy (Brandon et al., 2004), politically astute (DuBrin, 1990), business savvy (Brown, 1983), politically intelligent (McIntyre, 2005), and politically skilled (Ferris et al., 2005).

The purpose of this research was to determine if differences exist in the self-assessments of political skill based on two dispositional factors – age group and gender. This chapter will examine the definitions, characteristics, causes, and importance of organizational politics and political skill, as well as, what is known about the relationship between the dispositional factors of gender and age group and proficiency in political skill.

#### **Organizational Politics**

Scholars and practitioners alike have recognized that organizational politics exist as a phenomenon that is unavoidable and important to organizations and their employees in three ways. First, organizational politics is experienced by all members of an organization in varying degrees and frequency, regardless of one's position of authority within the organization (Ferris et al., 2002). Second, organizational politics is a fact of life within organizations (Ferris & Kacmar, 1992) and always present in organizational life (Hathaway,

1992). Third, organizational politics is important for the ability to assist in the normal and efficient functioning of the organization (Byrne, 2005) and is necessary to organizational life (Judge & Bretz, 1994; Pinto, 1997).

### **Organizational Politics Defined**

Organizational politics are defined by the intent of the user and are classified in one of three ways - positive, negative, or neutral. It involves the use of various methods of communication in order to accomplish the goals of the individual and the organization. Mintzberg (1983) defined organizational politics as “Individual or group behavior that is informal, ostensibly parochial, typically divisive, and above all, in a technical sense’ illegitimate—sanctioned not by formal authority, accepted ideology, or certified expertise” (p. 172). The characteristics Mintzberg associated with organizational politics are well established in the literature. First, it has been shown that organizational politics is often non-sanctioned behavior (Harrell-Cook, Ferris, & Dulebohn, 1999), it is highly covert, symbolic, and subject to perceptual differences by organizational members depending on their reference and prior experience (Kacmar, Bozeman, Carlson, & Anthony, 1999), and is considered actions not required by formal roles consistent with acceptable norms (Valle & Witt, 2001).

Second, organizational politics often requires one to go, “...outside the usual, formally sanctioned channels, something nearly every successful manager has done at one time or another” (Reardon, 2000, p. 2). It is a function of and directly related to the use of personal power in an attempt to protect an individual or the organization and its structure (Cobb & Margulies, 1981), and is often

informal in nature, designed to protect or enhance individuals during the decision-making process (Porter, Allen, & Angle, 1981; Drory, 1993). O'Conner and Morrison (2001) expanded the characteristic of informal protective behaviors when they wrote that organizational politics consists of "...behaviors that occur on an informal basis within an organization, and involve intentional acts of influence that are designed to protect or enhance individuals' professional careers when conflicting courses of action are possible" (p. 301).

### **Antecedents of Politics**

Organizations possess finite resources such as human resources, raw materials, and capital. It is the constant struggle for these resources which fuels competition (Truty, 2006), and when employees are faced with highly competitive environments political behavior is seen (Beeman & Sharkey, 1987). This behavior can exist even if the organization or department is normally less political in nature "Even if an organization, whether an entire company or department within a company, is not highly political, it is likely to become political if there is intense competitiveness in an uncertain performance/reward environment" (Beeman & Sharkey, 1987, p. 26).

Mintzberg (1985) theorized that the reasons for the creation of political environments are either absent or weak systems of influence or by hierarchies designed through formal authority "Politics can, of course, arise when these other systems of influence are absent or at least weak. But it can also be evoked by them, as when departmentalization, created through formal authority, encourages group processes that benefit parochial interests at the expense of

the needs of the organization at large” (p. 134). Mintzberg’s theory is supported by the literature. Several researchers have found that organizational politics flourishes in ambiguous and uncertain work environments (Ferris & Kacmar, 1992; Ferris et al., 1989, Othman, 2008) and is experienced to a higher degree under conditions of low organizational formalization (Fedor, Ferris, Harrell-Cook, & Russ, 1998). Organizations that possess limited structure create an environment where employees attempt to protect themselves by creating alliances with others in the organization. This response may align the employee against coworkers, the department, or the organization “Organizational politics pits some members of the organization against other members (sometimes without the knowledge of all the affected parties) or even against the organization itself” (Conner, 2006, p.718).

Gotsis and Kortezi (2010) agreed with Mintzberg’s (1985) theory and further defined weak or absent systems of influence when they wrote, “Organizational politics is expected to thrive in hierarchical, power-based structures, or in ambiguous settings lacking adequately defined goals, decision processes, and performance standards” (p. 499). This supports Rosen et al. (2006) earlier research findings “...when standards and reward structures are clear, employees better understand the reward system, view the organization as less political, and engage in less politicking” (p. 212).



## **Moral Implications and Outcomes**

Many employees perceive organizational politics as "...an illegitimate means of getting things done" (Reardon, 2000, p. 2). Gotsis and Kortezi (2010) found organizational politics perceived as:

...a form of anti-social behavior under different aspects: blaming and attacking others, by-passing proper superiors, withholding information, ingratiating and praising powerful others, creating and maintaining a favorable image through impression management, developing coalitions with powerful and influential persons, attaching to senior management right before promotion decisions, and creating obligations. (p. 499)

Organizational politics can also be used as a way to take advantage of workers who are in the lower levels of the organizational hierarchy or do not have access to what is happening behind the scenes (Ferris et al., 1989; Gandz & Murray, 1980; Nielsen, 1996; Porter et al., 1981; Reardon, 2002). It is also often associated with its misuse, "The negative communication associated with corporate politics stems from the general recognition that the rules of the game often stray far afield from what most people would consider fair play" (Beeman & Sharkey, 1987, p. 26).

Empirical research supports organizational politics as a contributing factor to higher levels of turn-over (Miller, Rutherford, & Kolodinsky, 2008); decreased employee attitudes with lower levels of job satisfaction and organizational commitment (Hochwarter, 2003); reduced levels of organizational citizenship behavior (Randall, Cropanzano, Bormann, & Birjulin, 1999); decreased overall

organizational performance (Vigoda, 2000); increased levels of negligent behavior (Vigoda, 2000); and job anxiety and stress-related outcomes (Ferris, Frink, Bhawuk, Zhou, & Gilmore, 1996; Poon, 2003, Vigoda, 2002). It also contributes to exit and withdrawal behaviors (Bozeman, Hochwarter, Perrewe, & Brymer, 2001; Randall et al., 1999); decreased job satisfaction (Cropanzano, Howes, Grandey, & Toth, 1997; Ferris et al., 1992; Kacmar, Bozeman, Carlson, & Anthony, 1999); turnover intentions (Randall et al., 1999); burn-out (Huang, Chuang, & Lin, 2003); and employee absenteeism (Gilmore, Ferris, Dulebohn, & Harrell-Cook, 1996; Vigoda, 2001).

Organizational politics has also been perceived as neutral and in many ways positive. Several researchers postulate that organizational politics exists with no preconceived notion as to its inherent good or evil; rather it just is (Ferris et al., 2005; Gandz & Murray, 1980; Kacmar & Ferris, 1991). Brandon and Seldman (2004) argue for organizational politics as a neutral construct when they write, "...[organizational politics] is value-free and has nothing to do with partisan politics. It is neither inherently good nor bad, neither vile nor virtuous" (p.5). Ferris, Fedor, Chachere, & Pondy (1989) note that the goal of organizational politics is to maximize long or short term self and organizational interests, whether consistent with or at the expense of interests of others, thus placing no moral value on the behaviors.

Davis and Gardner (2004) believe the morality of organizational politics is seen as a function of the intentions of the actor; while Kumar and Ghadially (1989) take a more pragmatic approach by determining morality by the personal

or organizational outcomes associated with the behavior. Fedor, Maslyn, Farmer, and Bettenhausen (2008) concur by adding the need to align personal and organizational goals with morality:

From this perspective, what may make political (i.e., non-normative, self-serving) behaviors positive is not whether they are self-serving per se, but, instead, the extent to which these self-serving behaviors are seen as legitimate or consistent with goals that enhance organizational effectiveness. (p. 78)

Warren (2003) argues that organizational politics that deviate from organizational norms can have positive organizational consequences. Often organizational politics is the only way available for organizational members to get things done or raise pertinent organizational issues deemed inappropriate at a certain time (Fedor & Maslyn, 2002). Other researchers hold that organizational politics is sometimes the only way to move organizations beyond the status quo (Kanter, 1983; Katz & Kahn, 1978; Pichault, 1995). From a practical perspective, organizational politics improve leader-member relations (Wayne & Green, 1993), career mentoring (Aryee, Wyatt, & Stone, 1996), and customer satisfaction (Yagil, 2001).

Organizational politics describes multiple attempts to influence behavior and actions within an organization, but does not characterize individuals who succeed in such an environment. For that reason, researchers began to study individuals who were successful within political environments and in so doing, determined which characteristics make-up political skill. This is important

because political organizations operate under conditions where resources are limited and individuals must rely on informal and unsanctioned means to advance their goals. In reality, modern managers and leaders must develop political skill to be successful (Peled, 2000).

### **Political Skill**

The construct of political skill could generally fit into theories of social effectiveness within organizations. Social effectiveness includes many dimensions relating to one's ability to function well in interpersonal situations (Todd et al., 2009). Ferris, Perrewe, and Douglas (2002) reviewed literature related to the similarities and differences between political skill and several variables of social effectiveness including self-monitoring, social competence, practical intelligence, social intelligence, and social skills. They determined these constructs were related in various ways. However, because political skill is differentiated by its specific referral to social understanding in workplace interactions they argued that political skill is a distinct construct. Further research performed by Ferris et al. (2005) also concluded that political skill is empirically distinct from other social effectiveness constructs.

### **Political Skill Defined**

Mintzberg (1985) characterized organizations as political arenas and suggested that in order for employees to be effective and even survive they must develop the ability to persuade, influence, and control others. He referred to the combination of these abilities as political skill and subsequent research in the area has defined political skill as, "...the ability to effectively understand others at

work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives" (Ahearn et al., 2004, p. 311).

Through extensive examination of the literature on organizational politics, Ferris et al. (2005) argued that any representative measure of political skill must include the four dimensions they defined below:

Social astuteness: "Individuals possessing political skill are astute observers and are keenly attuned to diverse social situations. They comprehend social interactions and accurately interpret their own behavior, as well as that of others, in social settings. They have strong powers of discernment and high self-awareness" (p. 129).

Interpersonal influence: "Politically skilled individuals have a subtle and convincing personal style that exerts a powerful influence on those around them. Individuals high in interpersonal influence nonetheless are capable of appropriately adapting and calibrating their behavior to each situation in order to elicit particular responses from others" (p. 129).

Networking ability: "Individuals with strong political skill are adept at developing and using diverse networks of people. People in these networks tend to hold assets seen as valuable and necessary for successful personal and organizational functioning" (p. 129).

Apparent sincerity: "Politically skilled individuals appear to others as possessing high levels of integrity, authenticity, sincerity, and genuineness. They are, or appear to be, honest, open, and forthright. This dimension of political skill strikes at the very heart of whether influence attempt will be successful, because

it focuses on the perceived intentions (i.e., as assessed by the target of influence) of the behavior exhibited (i.e., by the actor)” (p. 129).

### **The Importance of Political Skill**

Political skill is the way individuals cope with organizational politics and it is important for managers and leaders to develop their political savvy in order to attain their personal and professional goals, as well as the goals of their respective organizations (Brandon & Seldman, 2004; DeLuca, 1999; Gilley, 2006; Lien, 2005; Reardon 2000). This can involve the use of power to attain goals “In an office, people usually use power and other resources to control other people and obtain their preferred outcome” (Lien, 2005, p. 304). However, political skill is more than the use of individual power for personal gain. It provides individuals with the skills necessary to further the goals of the entire organization.

Political skill is comprised of several skills and abilities that include intuition (Reardon, 2005), assessment of power-wielders (McIntyre, 2005), introduction of controversial issues without provoking or offending anyone (McIntyre, 2005), developing and appropriately using political self-defense techniques (McIntyre, 2005), controlling impression management and leverage power (DuBrin, 1990), avoiding troublemakers (Cardillo, 2007), and using the grapevine wisely (DeLuca, 1999).

In totality, political skill, also known as political savvy, is the implementation of skills and abilities for managing ones conduct in a politically charged organization “[political savvy]...represents the totality of skills for

successfully navigating the political dynamics of an organization to accomplish one's goals" (Truty, 2006, What is Political Savvy and What Does It Look Like? section, para. 1). The importance of these skills cannot be underestimated and are important to an individual's success and feeling of reward in the workplace "...high self-monitoring abilities may be an important ingredient of successful political behavior in the workplace, and managers who lack these abilities may find political activities to be difficult or unrewarding" (Kirchmeyer, 1990, p. 342).

Being politically skilled allows an individual the opportunity to take calculated risks in making decisions and stand up for what is right for themselves and the organization. Taking calculated risk with the assistance of political skill can provide opportunities for success that may otherwise not be possible "Learning to take an intelligent gamble requires an understanding of what I call the courage calculation: a method of making success more likely while avoiding rash, unproductive, or irrational behavior" (Reardon, 2007, p. 60). Avoiding organizational politics can be the difference between success and failure in the workplace "To ignore office politics is to ignore those underlying forces that account for the differences in success between equally talented people, while people who understand and use office politics to their advantage are much more likely to succeed than their politically naive counterparts" (DuBrin, 1990, p. vi).

Research has found strong positive effects between personal and organizational success and political skill. It has been found that leader political skill is a positive predictor of team performance (Ahern et al., 2004), leader political skill has been positively associated with subordinates' perceptions of

leader effectiveness (Douglas & Ammeter, 2004), and political skill is the best predictor of a managers' job performance when examined compared to various other social effectiveness constructs (i.e., leadership, self-monitoring, self-efficacy, emotional intelligence) (Semader, Robins, & Ferris 2006).

Political skill has also been shown superior to self-efficacy in predicting contextual job performance (Jawahar, Meurs, Ferris, & Hochwarter, 2008) and is a significant predictor of overall job performance when controlling for general mental ability and Big-Five personality variables, both from a cross-sectional and predictive perspective (Bickle et al., 2011). Research also shows a positive relationship between political skill and employee advancements in income, hierarchical position, and career satisfaction (Ferris et al., 2008), higher ratings of performance (Kolodinsky, Treadway, & Ferris, 2007), positive performance ratings (Shaughnessy, Treadway, Breland, Williams, & Brouer, 2011), and promotability (Gentry, Gilmore, Shuffler, & Leslie, 2011).

Research has also confirmed that politically skilled individuals can strategically adjust their behavior according to the situations they find themselves in (Ferris et al., 2005) thus decreasing the negative health consequences often associated with organizational politics "Politically skilled individuals are more likely to enact influence behaviors that are appropriate for the given context" (Treadway, Hochwarter, Kacmar, & Ferris, 2005, p. 235). Therefore, political skill has positive effects on work-related stress, role-conflict, psychological strain (i.e., anxiety), and physiological strain (i.e., heart rate and blood pressure) (Perrewe & Nelson, 2004). Many researchers have noted that political skill provides one a



sense of security and self-confidence from having control and understanding of individuals and events in the workplace (Ferris et al., 2002; Ferris et al., 2005) and this allows them to use and execute influence attempts successfully. To that end, political skill results in a proactive strategy for working in turbulent, ambiguous, and stressful organizations (Perrewe, Ferris, Frink, & Anthony 2000).

### **Dispositional Factors Used in the Study**

This section provides the reasoning for the use of age group and gender as dependent variables and identifies characteristics commonly associated with these factors. The purpose is to draw inferences concerning the expected outcomes of the investigation.

The dispositional variables selected for this investigation were age group and gender. The gender variable followed generally accepted practice by asking the participant to denote their gender as either male or female. The age group variable also followed generally accepted practice by asking the participant to select the age range which corresponded with their current age. Studies examining political skill often collect dispositional data. However results of the data analysis do not become the focus area of the investigation. For example, Blickle et al. (2011) surveyed 610 individuals currently holding permanent jobs. The survey instrument included the dispositional factors of gender and age, but the data analysis focused on the prediction of job performance by political skill. A study by Westbrook et al. (2013) using the Organizational Savvy Self-Assessment (Brandon & Seldman, 2004) was the only research found where an analysis of data included a focus on a dispositional factor (i.e., gender). In that

study, no significant differences were indicated in participants' self-assessments, however, differences in multi-rater assessments were indicated in the factors of essential networking and managing perceptions.

Todd et al. (2009) postulate on what effects the dispositional factor of age may have on political skill "...it is possible that certain variables may serve as antecedents of political skill development. That is, as employees become older and gain experience working, they may develop or sharpen their political skill" (p. 199). Buchanan (2007) noted a lack of understanding on gender differences in political skill when he wrote, "The nature and significance of gender differences in this domain [political skill] are not well understood, either by researchers or, it seems, by managers" (p. 62). Due to the lack of empirical research, Treadway et al. (2004) suggested researchers study the effects of gender and age on political skill proficiency when they wrote, "Therefore, future research should attempt to more accurately model the role that gender and age may play in the possession and development of political skill by applying theory and analysis that can capture the variability in behavior across a life span" (p. 509).

The need to study the effects of age and gender on political skill have been well established, however, an absence of research exists in regards to what effects dispositional factors may have. A review of social theory provides a basis for inferences on the effects of age and gender on political skill proficiency.

### **Age Group**

Using social influence theory (Levy, Collins, & Nail, 1998) researchers try to understand how individuals use their social influence to achieve desired

outcomes. At work, employees wish to obtain promotions, salary increases, rewards, and other positive outcomes. In the attempt to obtain these, employees use or see coworkers use political skill with both positive and negative outcomes. Employees learn from these experiences, and as such, increase their political skill and awareness. Because these workplace instances happen over time, it is reasonable to conclude that older workers would be at a higher level of political skill. Todd et al. (2009) concur with this theory when they write:

Further, it is possible that certain variables may serve as antecedents of political skill development. In terms of age, it may be that political skill develops as a function of an individual's age. That is, as employees become older and gain experience working, they may develop or sharpen their political skills. An interaction between age and political skill may occur, such that older employees would express greater political skills than would younger employees, which would benefit older employees in terms of the positive outcomes associated with political skill. (p. 199)

## **Gender**

The stereotypical perspective of gender postulates that men and women use different methods to influence individuals because each are socialized differently based on their gender (Kray, Joshen, Galinsky, & Thompson, 2004). Social role theory (Eagly, 1987; Eagly, Wood, & Diekman, 2000) postulates that gender differences evolve due to two related processes: societal power relations and social learning. Cross and Madson (1997) note that men are more likely to act in agentic patterns of behavior that enhance personal status and thus be

more political than females. However, other studies have shown that females are more likely to define themselves in regards to the relationships they make and engage in interpersonal behaviors that support these relationships (Baumeister & Sommer, 1997; Kidder, 2002). “Women tend to build connections that provide them with social support and contribute to feelings of belongingness” (Kacmar, Bachrach, Harris, & Zivnuska, 2011, p. 634). Social role theory would suggest that males are more likely to focus on achieving status within organizations instead of developing relationships.

The social theories described combined in a chain of reasoning that suggested an inquiry into the effects of dispositional factors on political skill would extend the body of knowledge and improve understanding of the issue. The chain of reasoning which connected dispositional factors to political skill created the focused research problem. It included the past recommendations and conclusions of the researchers listed below.

1. Rosen, Harris, and Kacmar (2009) suggested that studies should be performed with employees of different demographic characteristics (e.g., age, race, gender, educational level, etc.) to gain a more refined understanding of the relationship between these variables.
2. Medina, Povedano, Martinez, and Munduate (2008) outlined the need to test gender differences in influence strategies.
3. Buchanan (2008) indicated a lack of understanding concerning the nature and significance of gender difference in political skill.

4. Treadway et al. (2004) urged researchers to find an accurate model for the role gender and age play in the possession and development of political skill.

From the discussion and logical reasoning presented above, it was clear that an inquiry of the similarities and differences between dispositional factors and political skill would extend the body of knowledge.

### **Summary**

This review of literature introduced organizational politics and political skill by outlining key research on the definitions, antecedents, moral implications, and the importance of each construct. Building upon that base is research indicating a need for proficiency in political skill is necessary for individuals to achieve individual and organizational success. Social theories postulate differences in political skill proficiency by gender and age, yet very little research exists to confirm these theories. For this reason, scholars have directed future researchers to examine if differences in political skill exist between gender categories and age groups.

This study of the differences in political skill by gender and age provide a clearer understanding of the effects of dispositional factors. The study utilize data obtained using a proven instrument to measure the self-assessments of political skill. The following chapter describes the methodology of the study, which describes how a utilization of these concepts and instruments accomplished the investigation.

## **CHAPTER 3**

### **METHODOLOGY**

This chapter describes the methodology utilized to achieve the purpose of this investigation and to answer the research questions. The purpose of the present study was to determine the extent dispositional characteristics of age and gender have on the individual assessment of political skill. In this context, the determination of effect was by statistical significance.

The research questions in the study were:

Research Question 1: Do differences exist between males and females in their self-assessments of political skill?

Research Question 2: Do differences exist among members of the three age groups in their self-assessments of political skill?

Research Question 3: Do differences exist between males and females participants within each age group in their self-assessments of political skill?

Research Question 4: Do differences exist among participants of the three age groups within each gender category in their self-assessments of political skill?

#### **Research Design**

This correlational study was conducted to identify differences in the self-assessment of political skill by gender and age group. This was accomplished by analyzing the data previously collected by Learn Associates LLC, with the use of the Political Skill Inventory (PSI) (Ferris et al., 2005). The PSI was offered to individuals mostly before participation in workshops, classes, and lectures on the

topics of organizational politics and political skill with the purpose of providing feedback on group competency level in political skill. The data were not previously analyzed to determine correlations between these various demographic groups.

### **Instrumentation**

Learn Associates LLC using the PSI collected the data for this study. The PSI consisted of eighteen items which participants answered by indicating to what extent they agree or disagree with each statement about themselves in the workplace on a one (strongly disagree) to seven (strongly agree) Likert scale. A sample item was "I am good at getting people to like me." Each PSI item relates to one of the four dimensions of political skill (i.e., social astuteness, interpersonal influence, networking ability, and apparent sincerity). The mean score of all items within a dimension indicates the participant's proficiency in that specific dimension of political skill. The mean score of all eighteen PSI items indicates the participant's total political skill proficiency. Individual political skill within a dimension and overall are defined by Ferris, Davidson, and Perrewé (2005, p. 22) as Low ( $M = 1.00$  to  $2.99$ ), Medium ( $M = 3.00$  to  $5.99$ ), and High ( $M = 6.00$  to  $7.00$ ).

### **Factor Structure.**

A factor structure analysis was conducted using a factor loading criterion of 0.4 for inclusion of items, four factors (i.e., the number of political skill dimensions), and varimax rotation (see Table 3.1). Comrey & Lee (1992) suggested that no item that loads below 0.3 be included in a factor. A loading of

0.45 is considered *fair* and 0.55 is considered *good* based on the amount of variance the item shares with the factor (i.e., the square of the loading). This study used a factor loading of 0.4, which is larger than midway between 0.3 and 0.45, and is the default value provided by NCSS 9 created by Dr. Jerry L. Hintze.

In two cases, the items meeting the criterion for factor inclusion given in the second column of Table 3.1 perfectly aligned with the skills sets (i.e., factors 1 and 2 with the dimensions of networking ability and apparent sincerity, respectively). The remaining two factors showed only partial alignment (i.e., factor 3, with four of the five items from the dimension of social astuteness; and factor 4 with three of the four items from the dimension of interpersonal influence). Some discretion was used in determining the dimensions in the third column of Table 3.1 corresponding to the factors. Finally, factor 3 included items from other dimensions (i.e., items 6 and 11 from networking ability, and item 12 from interpersonal influence). Furthermore, item 18 did not align with any of the four dimensions. All four of the political skill dimensions were represented in this varimax solution, albeit in various degrees. The output from the factor structure analysis is located in Appendix B.

### **Validity.**

Studies conducted by Ferris et al., (2005), built upon and expanded an earlier measurement of political skill by Ferris et al. (1999). In three investigations, involving seven samples, the results clearly indicated factor structure consistency across the studies, and convergent, discriminant, construct



and criterion-related validity of the instrument. Ferris et al. (2008) provided further support in a two-study investigation of political skill.

Table 3.1

*Factor Structure with Varimax Rotation*

| Factor | Items (Factor Structure) | Dimension               |
|--------|--------------------------|-------------------------|
| 1      | 11, 10, 15, 9, 1, 6      | Networking Ability      |
| 2      | 8, 13, 14                | Apparent Sincerity      |
| 3      | 16, 7, 17, 12, 6, 5, 11  | Social Astuteness       |
| 4      | 4, 3, 2                  | Interpersonal Influence |

*Note: The items under Items (Factor Structure) are listed in order of the magnitude of their factor loadings. Thus, Item 11 had the highest loading on Factor 1 (-0.722834) and Item 6 had the lowest loading on that factor (-0.463552), albeit still exceeding the minimum value for inclusion (0.4) in magnitude.*

They found factorial validity results supported the argument that the four dimensions of political skill are related, but distinct. Furthermore, second-order analysis demonstrated the four dimensions can be "...adequately represented by a single higher-order dimension" (p. 763). This work confirmed political skill can be studied as a whole or by specific dimension with the PSI.

In the present study, the factors represented the four dimensions of political skill very well in regard to their structure. Items with factor loadings of 0.4 or greater are considered partial validation of the PSI for measuring these dimensions. The PSI shows face validity, and has received extensive review and revision that provides a level of content validity. Construct validity is partially addressed by the exploratory factor analysis, and measures the degree to which the PSI produces data consistent with what is known about political skill, how

these skills vary by groups, and how they relate to other characteristics of individuals and organizations.

### **Cronbach's Coefficient Alpha.**

Cronbach's coefficient alpha indicates to what degree items measure the same construct, and computed for each of the four dimensions of political skill (see Table 3.2). The generally accepted minimum alpha value is 0.7 (Nunnally, 1978), which determines whether an instrument has an acceptable level of internal consistency reliability. Therefore, an instrument with an alpha level equal to or greater than 0.7 is considered acceptable (i.e., sufficiently reliable); and an instrument with an alpha level less than 0.7 is unacceptable (i.e., not sufficiently reliable). All dimensions except for interpersonal influence ( $\alpha=0.660$ ) had alpha values greater than 0.7.

Reliability is most critical when the instrument is used to make judgments or diagnoses about *individuals* in a clinical or educational setting, and the purpose of the PSI in the present study was not clinical in nature (i.e., diagnosis of individual political skill level), but rather to make inferences about demographic *groups* on political skill. Lower reliability, such as the one reported for interpersonal influence, corresponds to higher error variance in the analysis of group differences (Black, 1999). Given the size of the sample in the present study (i.e., 204 subjects), the slight departure of the estimate of reliability from the minimum acceptable value (i.e., 0.7) should not have a major confounding effect on the results. The output including Cronbach's Coefficient Alpha is located in Appendix C.

Table 3.2

*Cronbach's Coefficient Alpha for (a) the 4 Political Skill Categories, and (b) All 18 Items (4 Political Skill Dimensions) Combined (N=204)*

| Political Skill Category                  | Cronbach's Alpha |
|---|------------------|
| Networking Ability                        | 0.856            |
| Apparent Sincerity                        | 0.765            |
| Social Astuteness                         | 0.715            |
| Interpersonal Influence                   | 0.660*           |
| Political Skill (all categories combined) | 0.863            |

*Note: Standard accepted level of Cronbach's alpha is  $\alpha > 0.7$  (Nunnally, 1978). Categories with less than 0.7 are marked with an \*.*

### **Item-Score Correlations.**

Item score correlations were computed for each political skill dimension, and were primarily used in detecting items that were not consistent with others in the dimensions where the alpha was unacceptably low (i.e., Interpersonal Influence). The minimum acceptable level for item-score correlation is 0.3 and none of the items in any dimension had a correlation level less than 0.3. Shultz & Whitney (2005) suggest correlations of 0.1 to 0.5 typically suffice for acceptable levels of item-total correlation (i.e., measuring internal consistency and item discrimination). The value 0.3 is midway between these limits and has been found to be a good criterion based on experience with tests and surveys. The output from the item analysis is also located in Appendix C.

### **Sample & Data Collection**

Learn Associates LLC collected the data used for this study from 204 participants of classes, workshops, lectures, or individuals who were requested

to take the Political Skill Inventory (PSI) from participants of a graduate-level class. These classes, workshops, and lectures covered the topics of organizational politics and political skill, and the PSI was given to measure the individuals' political skill level. A verification of the legality in the use of the PSI was completed by contacting the author, Dr. Gerald Ferris via e-mail (see Appendix D). Dr. Ferris verified the PSI as open-source and available for use. The owner of Learn Associates LLC and chair of researcher's doctoral committee, Dr. Thomas Westbrook provided permission for use of the dataset.

Participants were not solicited by the investigator to participate in the self-assessment process for purpose of the study; therefore, informed consent was not obtained. The researcher did not have access to identifying population information, as the dataset provided by Learn Associates LLC contained only the answers to the PSI items and the demographic information of gender and age. Because of this, it was not be possible for the researcher to identify individual respondents.

The sample was a nonrandom cluster sample, consisting of four clusters of respondents. These clusters included: (1) a society of Certified Public Accountants (CPA), (2) a CPA firm, (3) a bank, and (4) a class of students in educational leadership combined with a *snowball* sample obtained by having the students in the class secure responses to the PSI instrument from co-workers in their various places of employment (See Table 3.3).

Clearly, the first three of these clusters were drawn from the banking and finance areas; the students and their associates comprising cluster 4, could have

been from any organization. Thus, at least 167 out of the sample of 204 or 81.9% were from the banking and finance areas.

Table 3.3

*Number of Participants by Cluster*

| Cluster Number              | N   |
|-----------------------------|-----|
| 1 - Society of CPAs         | 82  |
| 2 - Private CPA Firm        | 43  |
| 3 - Community Bank          | 42  |
| 4 - Class & Snowball Sample | 37  |
| Total Participants          | 204 |

### **Power Analysis.**

A power analysis was conducted using the computer software PASS 12 created by Dr. Jerry L. Hintze to determine if the sample size was adequate for conducting statistical tests needed to answer the research questions at an adequate power level of 0.75. For a minimum power of 0.75 and moderate to large effect sizes, it was determined that 192 was a sufficient sample size. Thus, the present study's sample size of 204 was more than adequate for these analyses.

### **Procedures**

The data were mostly collected prior to workshops, classes, or lectures to various groups on organizational politics and political skill using the online survey tool SurveyMonkey.com. The purpose of the data collection was to provide participants of each training group with specific demographic and statistical

information. This information assisted the facilitator by providing talking points on the similarities and differences within the group. A dataset containing the combined responses from each participant were kept by Learn Associates LLC, and requested by the researcher for use in this investigation.

Two-hundred and four individuals participated in completing the PSI. Data from the completed PSIs were downloaded into a Microsoft Excel spreadsheet from SurveyMonkey.com and transferred to NCSS 9 for storage and analysis. An additional copy of the Microsoft Excel spreadsheet containing the complete dataset was provided to Dr. James Veale in-person via a computer storage device for his use to verify the results of the researcher. An analysis of the data was conducted, with the details described in the proceeding section.

## **Analysis**

This section describes the analysis and statistical tests applied to the dataset collected by Learn Associates LLC. The generally accepted .05 level of significance was utilized in determining statistically significant results (Fisher, 1970) for the initial or omnibus testing using a three-way ANOVA that involves the factors cluster, age group, and gender.

The cluster factor was included to mitigate any possible dependencies due to the clustering. According to Miller (1986);

In designs with multiple observations per cell dependence within cells could be created by the presence of an unaccounted for extra nuisance factor that forms blocks of observations. Observations grouping themselves into clusters is an indication of the existence of such a

variable. The remedy for this ailment is ... (to) use a higher-way (e.g., three-way) classification for the analysis. (pp. 141-2)

This cluster factor is of no interest in terms of the research questions, but will remedy, or at least mitigate, any problems associated with possible dependencies due to the clustering and remove extraneous variability due to this factor, increasing the sensitivity of the tests for gender and age.

The full model includes fixed effects for the cluster from which the subject is drawn, the subject's age group, gender, and the interaction of age group and gender. It also includes a random error term for residual or unexplained variation. The errors (or equivalently, the political skill scores) are assumed to be independently and normally distributed, with common variance, within each cell. The cells are defined by the 4 x 3 x 2 or 24 cluster, age, and gender factor combinations.

The eta squared statistic was utilized in both the initial or omnibus tests and the follow-up tests for dimensions where statistically significant interaction effects were indicated to quantify the size of the difference in the dependent variable associated with the participant's group as defined by the independent variable (Richardson, 2011). The effect size measure eta squared was defined by the sum of squares for the effect divided by the total sum of squares corrected for the mean—the proportion of variance in the dependent variable explained by the main or interaction effect.

The generally accepted levels of effect size and their corresponding labels are small (.010), medium (.059), and large (.138) (Cohen, 1988). However, for

the present study discretion was utilized in providing a range in eta squared: small (.01 to .03), small to medium (.031 to .058), medium (.059 to .091), medium to large (.092 to .137), and large (greater than or equal to .138). The statistical analyses for the research questions were conducted by the researcher using NCSS 9 and verified by committee member Dr. James Veale.

### **Research Question 1.**

The purpose of the first research question was to determine if differences exist in political skill between male and female participants. The requirement for additional analysis was determined by conducting an initial omnibus or overall test of the main and interaction effects using a three-way ANOVA with the cluster factor, age group, and gender. The cluster factor is of no interest to the research questions, but will remedy, or at least mitigate, any problems associated with possible dependencies due to the clustering and remove extraneous variability due to this factor, increasing the sensitivity of the tests for gender.

If the interaction effect was not statistically significant, the main effect of gender was determined by the F-test in the three-way ANOVA using a .05 level of significance. This process was used for the overall political skill score and those on each of the four dimensions of political skill. Box plots were produced to assess normality and to identify severe or extreme outliers. Analyses were performed with and without extreme outliers to assess their importance in the results.

The eta squared statistic was used to quantify the size of the difference in the main effects of gender. The levels utilized for describing the effect size of eta



squared in the present study were: small (.01 to .03), small to medium (.031 to .058), medium (.059 to .091), medium to large (.092 to .137), and large (greater than or equal to .138).

### **Research Question 2.**

The purpose of the second research question was to determine if differences exist in political skill among the participants in the three age groups. As with Research Question 1, the requirement for additional analysis was determined by conducting an initial omnibus or overall test of the main and interaction effects using a three-way ANOVA with the cluster factor, age group, and gender. The cluster factor is of no interest to the research questions, but will remedy, or at least mitigate, any problems associated with possible dependencies due to the clustering and remove extraneous variability due to this factor, increasing the sensitivity of the tests for age group.

If the interaction effect was not statistically significant, the main effect of age group was determined by the F-test in the three-way ANOVA using a .05 level of significance. Follow-up multiple comparisons were made for the age group factor using the Tukey-Kramer procedure. This process was used for the overall political skill score and those on each of the four dimensions of political skill. Box plots were produced to determine normality and to identify severe or extreme outliers. Analyses were performed with and without extreme outliers to assess their importance in the results.

The eta squared statistic was used to quantify the size of the difference in the main effects of age group. The levels utilized for describing the effect size of eta squared for age group are the same as in Research Question 1.

### **Research Question 3.**

The purpose of the third research question was to determine if differences exist in political skill between male and female participants within each age group.

If the interaction (i.e., age group by gender) effect was statistically significant, follow-up tests were conducted for the simple effects of gender within each age group. In each of these cases, a two-way ANOVA was conducted with the cluster and gender factors. An F-test was used for testing the simple effects of gender in each age group. The level of significance for each of these tests was  $.05/3$  or  $.017$ , since there were three tests conducted and this adjustment can be shown to maintain the overall or *family-wise* level of significance at  $.05$  (Maxwell & Delaney, 2004). Each of these tests of simple effects has reduced power, since they are based on subsamples conditioning on age group and the level of significance for each test is reduced to  $.017$  to maintain a family-wise rate of  $.05$ .

Effect sizes were computed for gender whether or not it was statistically significant in these simple effects tests. In addition to eta squared, a standardized mean difference ( $d$ ) statistic was computed by taking the difference in the gender means divided by the appropriate measure of the population standard deviation. The denominator is the square root of the estimate of

variance obtained by dividing the pooled sum of squares (i.e., clusters and error) by the pooled degrees of freedom (i.e., clusters and error) (Cortina & Nouri, 2000; Glass, McGaw, & Smith, 1981). The sum of squares for the off-factor or clusters, must be added to the within cells (i.e., error) sum of squares since they occur naturally in the population from which the sample was drawn (Cortina & Nouri, 2000). Similarly, the degrees of freedom for clusters must be added to those of within cells (i.e., error), to obtain the appropriate denominator for this estimated variance.

The means used in the numerator of the “d” statistic are least squares means provided by the general linear models or regression approach to the analysis of variance. According to a generalization of the Gauss-Markov theorem, the least squares means have minimum variance among all linear unbiased estimators of the population means, assuming the errors have mean zero, common variance, and are uncorrelated (Winer, 1971).

The levels utilized for describing the standardized mean difference (d) in present study were: small (0.2 to 0.34), small to medium (0.35 to 0.49), medium (0.5 to 0.64), medium to large (0.65 to 0.79), and large (greater than or equal to 0.8).

#### **Research Question 4.**

The purpose of the fourth research question was to determine if differences exist in political skill among participants of the three age groups within each gender category.

If the interaction (i.e., age group by gender) effect was statistically significant, follow-up tests were conducted for the simple effects of age group within each gender category. In each of these cases, a two-way ANOVA was conducted with the cluster and age group factors. An F-test was used for testing the simple effects of age group in each gender category. The level of significance for each of these tests was  $.05/2$  or  $.025$ , since there were three tests conducted and this adjustment can be shown to maintain the overall or *family-wise* level of significance at  $.05$  (Maxwell & Delaney, 2004). Each of these tests of simple effects has reduced power, since they are based on subsamples conditioning on age group and the level of significance for each test is reduced to  $.025$  to maintain a family-wise rate of  $.05$ .

Eta squared was calculated for the simple effects of age group, whether or not age was statistically significant in these simple effects tests. Eta squared is recommended as an effect size measure in ANOVA where the number of groups compared exceeds two and there is a natural ordering among them, as is the case with the age factor (Cortina and Nouri, 2000 & Warner, R., 2007). The levels utilized for describing the effect size of eta squared are the same as in Research Question 1.

### **Summary**

This chapter described the methodology used in the study using existing data from participants of workshops, classes, and lectures on organizational politics and political skill. The participants were given the PSI developed by

Ferris et al. (2005), and the results were stored in Microsoft Excel and NCSS version 9 files where they were analyzed.

## **CHAPTER 4**

### **RESULTS**

This chapter includes the demographic characteristics of the participants and the results of the analysis of the effects of age group, gender, and age group by gender interaction on political skill. The purpose of this study was to determine to what extent the dispositional factors of age group and gender affect self-assessments of political skill. The Political Skill Inventory (PSI) developed by Ferris et al. (2005) measured political skill by self-rater. The dataset included responses from 204 participants of classes, workshops, lectures, or those requested to take the PSI by class participants covering the topics of organizational politics and political skill.

A descriptive analysis of the dataset identified 93 males (45.6%) and 111 females (54.4%). A breakdown by age group revealed 63 participants between the ages of 18 and 30 years old in age group 1 (30.9%), 86 participants between the ages of 31 and 47 years old in age group 2 (42.2%), and 55 participants between the ages of 48 and 66 in age group 3 (26.9%). A summary of the relevant statistical profile is located in Table 4.1 and additional descriptive data are located in Table 4.7 later in this chapter.

#### **Identification of Outliers**

Outliers are elements in a dataset that stand out or appear to be inconsistent with the rest. For the present study, box plots were utilized to identify both mild and severe outliers for the factors of age group and gender.

The boundaries for the severe outliers were calculated as follows: the box edge  $\pm$  3.0 times the interquartile range (IQR).

Table 4.1

*Statistical Profile of the Self-Rater Sample*

| Category                         | N   | Percent |
|----------------------------------|-----|---------|
| <i>Ratee Gender</i>              |     |         |
| Males                            | 93  | 45.6%   |
| Females                          | 111 | 54.4%   |
| Total number of ratees           | 204 | 100.0%  |
| <i>Ratee Age Groups</i>          |     |         |
| Age Group 1 (Ages 18 to 30)      | 63  | 30.9%   |
| Age Group 2 (Ages 31 to 47)      | 86  | 42.2%   |
| Age Group 3 (Ages 48 to 66)      | 55  | 26.9%   |
| Total number of ratees           | 204 | 100.0%  |
| <i>Ratee Age Group by Gender</i> |     |         |
| Age Group 1 – Male               | 27  | 13.3%   |
| Age Group 1 – Female             | 36  | 17.6%   |
| Age Group 2 – Male               | 36  | 17.6%   |
| Age Group 2 – Female             | 50  | 24.5%   |
| Age Group 3 – Male               | 30  | 14.7%   |
| Age Group 3 – Female             | 25  | 12.3%   |
| Total number of ratees           | 204 | 100.0%  |

Severe outliers were identified in two dimensions of political skill (networking ability and interpersonal influence). In the networking ability dimension (NA), participant 48 was identified as a severe outlier (see Figure 4.1).

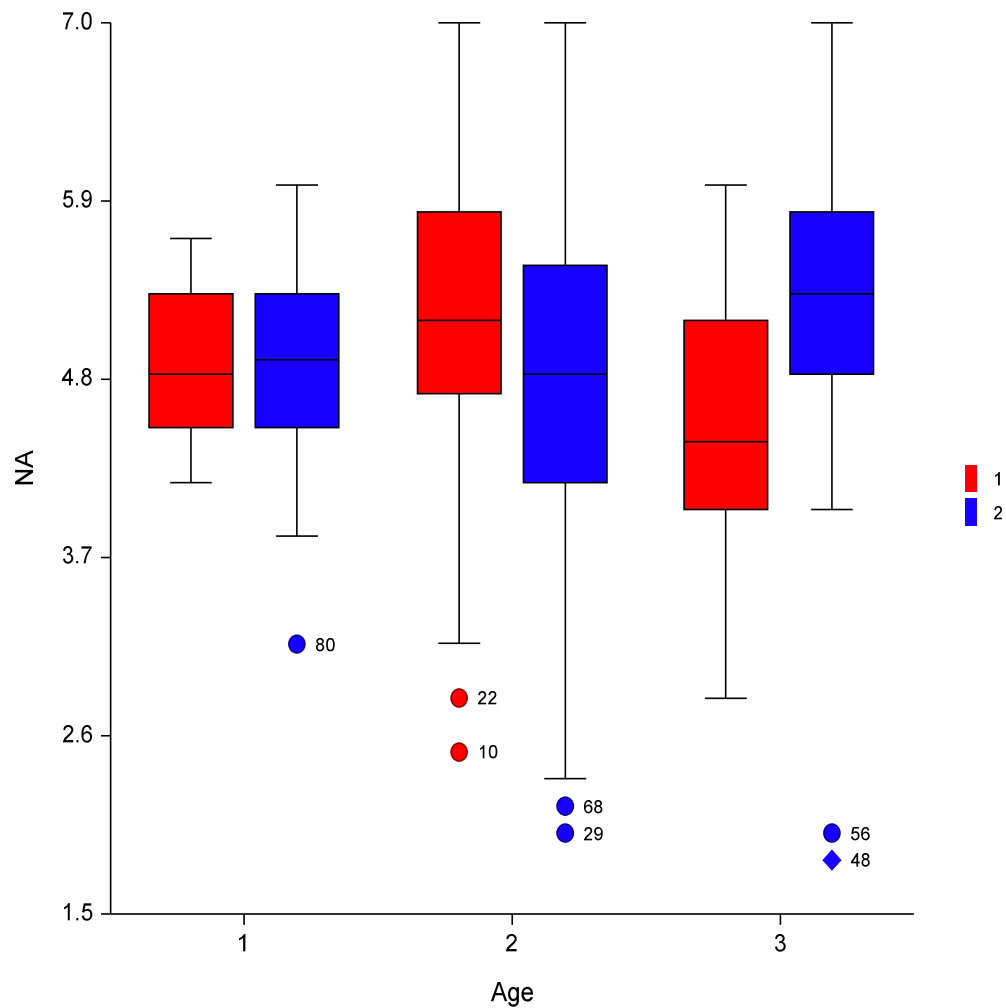


Figure 4.1. Box plot of networking ability dimension.

In the interpersonal influence dimension (II), participant 56 was identified as a severe outlier (see Figure 4.2). Analyses were run with and without severe outliers to assess their importance in the results.



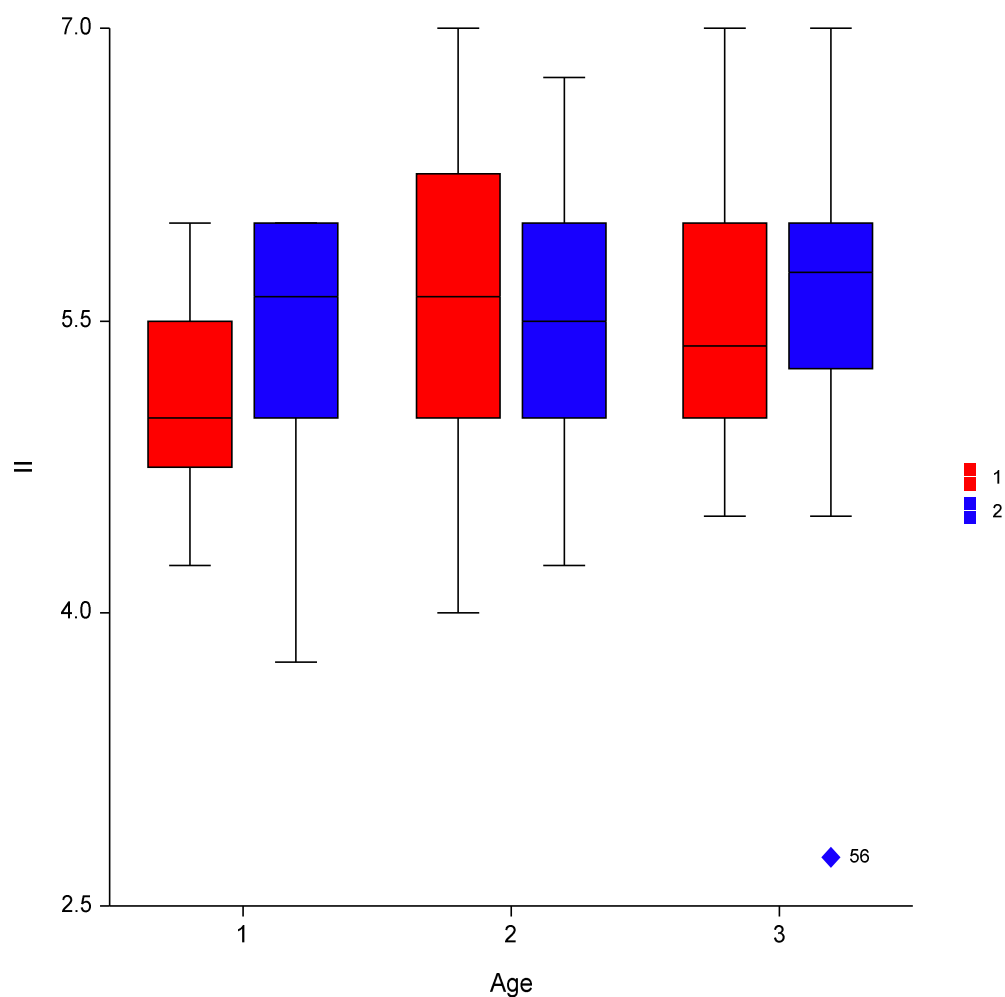


Figure 4.2. Box plot of interpersonal influence dimension.

Box plots were also utilized to identify both mild and severe outliers for the cluster factors. No severe outliers for this factor were indicated using this grouping variable. The box plots are located in Appendix E.

### Omnibus or Overall Tests of Effects

To determine whether additional analyses were required for each research question, initial omnibus or overall tests of the main and interaction effects were conducted using a three-way ANOVA, with the cluster (i.e., organization) factor,

age group, and gender. The full model includes fixed effects for the cluster from which the subject is drawn, the subject's age, gender, and the interaction of age group and gender. It also includes a random error term for residual or unexplained variation. The errors, or equivalently the political skill scores, were assumed to be independently and normally distributed, with common variance within each cell. The cells are defined by the 4 x 3 x 2 or 24 cluster, age group, and gender factor combinations. The data are summarized in Table 4.2 for this analysis and the output from the omnibus tests for the dimensions of networking ability, apparent sincerity, social astuteness, interpersonal influence as well as overall political skill are located in Appendices F to J, respectively.

Significant interaction effects were identified in the network ability dimension  $F(2, 195) = 3.97, p = 0.021, \eta^2 = .037$ ; networking ability excluding outlier  $F(2, 194) = 5.31, p = 0.006, \eta^2 = .049$ ; and overall political skill  $F(2, 195) = 4.05, p = 0.019, \eta^2 = .033$ . These interaction effects required additional analysis (see Research Questions 3 & 4). Small effect sizes were identified by eta squared for the age group factor in apparent sincerity ( $\eta^2 = 0.012$ ), the interaction factor (i.e., age group x gender) for social astuteness ( $\eta^2 = 0.024$ ), and the interaction factor for interpersonal influence excluding outlier ( $\eta^2 = 0.014$ ).

Table 4.2

*Results of Initial Testing Using Three-Way ANOVA*

| Source                                      | Df  | SS      | MS     | F     | P      | eta <sup>2</sup> |
|---|-----|---------|--------|-------|--------|------------------|
| <i>Dimension 1: Networking Ability</i>      |     |         |        |       |        |                  |
| A: Cluster                                  | 3   | 11.275  | 3.758  | 4.38  | 0.005  | .061             |
| B: Age Group                                | 2   | 0.271   | 0.135  | 0.16  | 0.854  | .001             |
| C: Gender                                   | 1   | 0.003   | 0.003  | 0.00  | 0.954  | .000             |
| B x C                                       | 2   | 6.798   | 3.399  | 3.97  | 0.021* | .037^            |
| S: Error                                    | 195 | 167.139 | 0.857  |       |        |                  |
| Total                                       | 203 | 185.213 |        |       |        |                  |
| <i>Networking Ability excluding outlier</i> |     |         |        |       |        |                  |
| A: Cluster                                  | 3   | 9.673   | 3.224  | 3.97  | 0.009  | .055             |
| B: Age Group                                | 2   | 0.157   | 0.078  | 0.10  | 0.908  | .001             |
| C: Gender                                   | 1   | 0.132   | 0.132  | 0.16  | 0.687  | .001             |
| B x C                                       | 2   | 8.637   | 4.318  | 5.31  | 0.006* | .049^            |
| S: Error                                    | 194 | 157.625 | 0.813  |       |        |                  |
| Total                                       | 202 | 175.825 |        |       |        |                  |
| <i>Dimension 2: Apparent Sincerity</i>      |     |         |        |       |        |                  |
| A: Cluster                                  | 3   | 42.667  | 14.222 | 54.09 | 0.000  | .368             |
| B: Age Group                                | 2   | 1.354   | 0.677  | 2.57  | 0.079  | .012^            |
| C: Gender                                   | 1   | 0.032   | 0.032  | 0.12  | 0.726  | .000             |
| B x C                                       | 2   | 0.161   | 0.081  | 0.31  | 0.736  | .001             |
| S: Error                                    | 195 | 51.271  | 0.263  |       |        |                  |
| Total                                       | 203 | 115.949 |        |       |        |                  |
| <i>Dimension 3: Social Astuteness</i>       |     |         |        |       |        |                  |
| A: Cluster                                  | 3   | 17.659  | 5.886  | 11.40 | 0.000  | .145             |
| B: Age Group                                | 2   | 0.193   | 0.096  | 0.19  | 0.830  | .002             |
| C: Gender                                   | 1   | 0.176   | 0.176  | 0.34  | 0.560  | .001             |
| B x C                                       | 2   | 2.956   | 1.478  | 2.86  | 0.059  | .024^            |
| S: Error                                    | 195 | 100.645 | 0.516  |       |        |                  |
| Total                                       | 203 | 121.506 |        |       |        |                  |

Note: \* Significance at  $p \leq 0.05$  are indicated for B, C, or B x C. ^ eta<sup>2</sup>  $\geq .01$  indicated for B, C, or B x C.

Table 4.2

*Results of Initial Testing Using Three-Way ANOVA (Continued)*

| Source   | Df  | SS     | MS     | F     | P      | eta <sup>2</sup>  |
|--|-----|--------|--------|-------|--------|-------------------|
| <i>Dimension 4: Interpersonal Influence</i>      |     |        |        |       |        |                   |
| A: Cluster                                       | 3   | 16.476 | 5.492  | 14.57 | 0.000  | .174              |
| B: Age Group                                     | 2   | 0.092  | 0.046  | 0.12  | 0.885  | .001              |
| C: Gender  | 1   | 0.101  | 0.101  | 0.27  | 0.605  | .001              |
| B x C  | 2   | 0.649  | 0.324  | 0.86  | 0.425  | .007              |
| S: Error   | 195 | 73.482 | 0.377  |       |        |                   |
| Total  | 203 | 94.690 |        |       |        |                   |
| <i>Interpersonal Influence excluding outlier</i> |     |        |        |       |        |                   |
| A: Cluster                                       | 3   | 16.256 | 5.419  | 16.19 | 0.000  | .186              |
| B: Age Group                                     | 2   | 0.430  | 0.215  | 0.64  | 0.527  | .005              |
| C: Gender  | 1   | 0.373  | 0.373  | 1.11  | 0.293  | .004              |
| B x C  | 2   | 1.222  | 0.611  | 1.82  | 0.164  | .014 <sup>^</sup> |
| S: Error   | 194 | 64.941 | 0.335  |       |        |                   |
| Total  | 202 | 87.185 |        |       |        |                   |
| <i>Overall Political Skill</i>                   |     |        |        |       |        |                   |
| A: Cluster                                       | 3   | 11.212 | 3.737  | 12.26 | 0.000  | .150              |
| B: Age Group                                     | 2   | 0.188  | 0.094  | 0.31  | 0.735  | .003              |
| C: Gender  | 1   | 0.055  | 0.0555 | 0.18  | 0.671  | .001              |
| B x C  | 2   | 2.472  | 1.236  | 4.05  | 0.019* | .033 <sup>^</sup> |
| S: Error   | 195 | 59.454 | 0.305  |       |        |                   |
| Total  | 203 | 74.715 |        |       |        |                   |

Note: \* Significance at  $p \leq 0.05$  are indicated for B, C, or B x C. <sup>^</sup> eta<sup>2</sup>  $\geq .01$  indicated for B, C, or B x C.

### Results for Research Questions

This section includes each research question followed by the results of the analyses. The cluster factor was included in these analyses to mitigate possible dependencies due to the clustering (Miller, 1986). Although this factor proved to be statistically significant in many of the analyses, it was not germane to the research questions and thus excluded from extensive reporting.

**Research Question 1**

Do differences exist between males and females in their self-assessments of political skill?

The purpose of this research question was to determine if differences exist in political skill between male and female participants. A summary of the results of the initial testing utilizing the three-way ANOVA is located in Table 4.2. As reported in the Omnibus or Overall Tests of Effects section, the interaction effects for the dimension of networking ability with and without outlier and overall political skill were significant, thus requiring additional analyses (see Research Questions 3 & 4).

In the remaining dimensions, where the interaction effects were not statistically significant, the main effect of gender was determined by the F-test conducted in the three-way ANOVA using a .05 level of significance. In those cases, no significant mean differences were found for the gender factor and gender factor effect size as measured by eta squared was not indicated above the .01 level. Cohen (1988) suggests .01 as the minimum level for eta squared required in detecting an effect.

These results suggest there is no significant difference in political skill between males and females.

**Research Question 2**

Do differences exist among members of the three age groups in their self-assessments of political skill?

The purpose of the second research question was to determine if differences exist in political skill among the participants in the three age groups. The results of the initial testing using the three-way ANOVA are provided in Table 4.2. As reported in Research Question 1, the interaction effects for the dimension of networking ability with and without outlier, and overall political skill were significant, thus requiring additional analyses (see Research Questions 3 & 4).

Where the interaction effect was not statistically significant, the main effect of age group was determined by the F-test in the three-way ANOVA using a .05 level of significance. No significant mean differences were identified for the age group factor. However, small effects were identified for the age group factor for apparent sincerity ( $\eta^2 = .012$ ). Although the age group main effect was not statistically significant for apparent sincerity ( $p = .079$ ), a Tukey-Kramer multiple-comparison test detected a significant difference between age group 1 and age group 3 ( $p = .046$ ).

These results suggest there is significant difference in the political skill dimension of apparent sincerity between age groups 1 ( $M = 5.934$ ) and 3 ( $M = 6.161$ ). However, the effect size was small (.012) as was the difference in the means between the two age groups (0.227). Moreover, the omnibus test for comparing the differences among the three groups was not statistically significant ( $p = .079 > .05$ ).

### Research Question 3

Do differences exist between males and females participants within each age group in their self-assessments of political skill?

The purpose of the third research question was to determine if differences exist in political skill between male and female participants within each age group. Because significant interaction effects were indicated in networking ability ( $p = 0.021$ ), networking ability excluding outlier ( $p = 0.006$ ), and overall political skill ( $p = 0.019$ ) (see Table 4.2), follow-up tests were conducted for the simple effects of gender, in each age group separately, using the .05/3 or .017 level of significance (Maxwell & Delaney, 2004). A summary of the results of this follow-up testing are shown in Table 4.3.

No significant mean differences were found for the gender factor. However, small to medium effects were identified for the gender factor in age group 2 for networking ability ( $\eta^2 = .042$ ), networking ability excluding outlier ( $\eta^2 = 0.042$ ), and overall political skill ( $\eta^2 = 0.032$ ). Small to medium effects were also identified for the gender factor in age group 3 for networking ability ( $\eta^2 = 0.050$ ) and overall political skill ( $\eta^2 = 0.046$ ), and a medium to large effect was found for the gender factor in age group 3 for networking ability excluding outlier ( $\eta^2 = 0.104$ ).

The results for the standardized mean difference ( $d$ ) analysis are located in Table 4.4. Small to medium effects in favor of males were indicated in age group 2 for networking ability ( $d = 0.421$ ), networking ability excluding outlier ( $d = 0.421$ ), and overall political skill ( $d = 0.367$ ).

Table 4.3

*Results of Follow-up Testing for Gender Differences in Each Age Group Category where Significant Interaction Effects were Indicated*

| Source                    | Df | SS      | MS    | F    | P     | eta <sup>2</sup> |
|---------------------------|----|---------|-------|------|-------|------------------|
| <i>Networking Ability</i> |    |         |       |      |       |                  |
| <i>Age Group 1</i>        |    |         |       |      |       |                  |
| A: Cluster                | 3  | 0.347   | 0.116 | 0.34 | 0.798 | .017             |
| B: Gender                 | 1  | 0.012   | 0.012 | 0.03 | 0.853 | .001             |
| S: Error                  | 58 | 19.863  | 0.342 |      |       |                  |
| Total                     | 62 | 20.215  |       |      |       |                  |
| <i>Networking Ability</i> |    |         |       |      |       |                  |
| <i>Age Group 2</i>        |    |         |       |      |       |                  |
| A: Cluster                | 3  | 13.239  | 4.413 | 3.81 | 0.013 | .120             |
| B: Gender                 | 1  | 4.665   | 4.665 | 4.02 | 0.048 | .042^            |
| S: Error                  | 81 | 93.932  | 1.160 |      |       |                  |
| Total                     | 85 | 110.261 |       |      |       |                  |
| <i>Networking Ability</i> |    |         |       |      |       |                  |
| <i>Age Group 3</i>        |    |         |       |      |       |                  |
| A: Cluster                | 3  | 2.379   | 0.793 | 0.82 | 0.492 | .044             |
| B: Gender                 | 1  | 2.740   | 2.740 | 2.82 | 0.100 | .050^            |
| S: Error                  | 50 | 48.654  | 0.974 |      |       |                  |
| Total                     | 54 | 54.442  |       |      |       |                  |

*Note: \* Significance at  $p \leq 0.017$  for B only. ^ eta<sup>2</sup>  $\geq .01$  indicated for B only.*



Table 4.3

*Results of Follow-up Testing for Gender Differences in Each Age Group Category where Significant Interaction Effects were Indicated (Continued)*

| Source                                      | Df | SS      | MS    | F    | P     | eta <sup>2</sup> |
|---|----|---------|-------|------|-------|------------------|
| <i>Networking Ability excluding outlier</i> |    |         |       |      |       |                  |
| <i>Age Group 1</i>                          |    |         |       |      |       |                  |
| A: Cluster                                  | 3  | 0.347   | 0.116 | 0.34 | 0.798 | .017             |
| B: Gender                                   | 1  | 0.012   | 0.012 | 0.03 | 0.853 | .001             |
| S: Error                                    | 58 | 19.863  | 0.342 |      |       |                  |
| Total                                       | 62 | 20.215  |       |      |       |                  |
| <i>Networking Ability excluding outlier</i> |    |         |       |      |       |                  |
| <i>Age Group 2</i>                          |    |         |       |      |       |                  |
| A: Cluster                                  | 3  | 13.238  | 4.413 | 3.81 | 0.013 | .120             |
| B: Gender                                   | 1  | 4.665   | 4.665 | 4.02 | 0.048 | .042^            |
| S: Error                                    | 81 | 93.932  | 1.160 |      |       |                  |
| Total                                       | 85 | 110.261 |       |      |       |                  |
| <i>Networking Ability excluding outlier</i> |    |         |       |      |       |                  |
| <i>Age Group 3</i>                          |    |         |       |      |       |                  |
| A: Cluster                                  | 3  | 1.181   | 0.394 | 0.50 | 0.685 | .026             |
| B: Gender                                   | 1  | 4.719   | 4.719 | 5.97 | 0.018 | .104^            |
| S: Error                                    | 49 | 38.737  | 0.791 |      |       |                  |
| Total                                       | 53 | 45.313  |       |      |       |                  |

*Note: \* Significance at  $p \leq 0.017$  indicated for B only. ^ eta<sup>2</sup>  $\geq .01$  indicated for B only.*

Table 4.3

*Results of Follow-up Testing for Gender Differences in Each Age Group Category where Significant Interaction Effects were Indicated (Continued)*

| Source                         | Df | SS     | MS    | F    | P     | eta <sup>2</sup>  |
|--------------------------------|----|--------|-------|------|-------|-------------------|
| <i>Overall Political Skill</i> |    |        |       |      |       |                   |
| <i>Age Group 1</i>             |    |        |       |      |       |                   |
| A: Cluster                     | 3  | 2.283  | 0.761 | 5.54 | 0.002 | .211              |
| B: Gender                      | 1  | 0.014  | 0.014 | 0.10 | 0.749 | .001              |
| S: Error                       | 58 | 7.962  | 0.137 |      |       |                   |
| Total                          | 62 | 10.807 |       |      |       |                   |
| <i>Overall Political Skill</i> |    |        |       |      |       |                   |
| <i>Age Group 2</i>             |    |        |       |      |       |                   |
| A: Cluster                     | 3  | 7.588  | 2.529 | 6.27 | 0.001 | .185              |
| B: Gender                      | 1  | 1.331  | 1.331 | 3.30 | 0.073 | .032 <sup>^</sup> |
| S: Error                       | 81 | 32.661 | 0.403 |      |       |                   |
| Total                          | 85 | 41.063 |       |      |       |                   |
| <i>Overall Political Skill</i> |    |        |       |      |       |                   |
| <i>Age Group 3</i>             |    |        |       |      |       |                   |
| A: Cluster                     | 3  | 3.440  | 1.147 | 3.43 | 0.024 | .160              |
| B: Gender                      | 1  | 0.991  | 0.991 | 2.96 | 0.091 | .046 <sup>^</sup> |
| S: Error                       | 50 | 16.732 | 0.335 |      |       |                   |
| Total                          | 54 | 21.479 |       |      |       |                   |

*Note: \* Significance at  $p \leq 0.017$  indicated for B only. <sup>^</sup> eta<sup>2</sup>  $\geq .01$  indicated for B only.*

Small to medium effects in favor of females were identified in age group 3 for networking ability ( $d = -0.462$ ) and overall political skill ( $d = -0.442$ ). A medium to large effect in favor of females was indicated for networking ability excluding outlier ( $d = -0.690$ ).

Table 4.4

*Results for Standardized Mean Difference (d) by Gender where Significant Interaction Effects were Identified by Three-Way ANOVA.*

| Age Group | Overall Political Skill | Networking Ability | Networking Ability excluding outlier |
|-----------|-------------------------|--------------------|--------------------------------------|
| 1         | -0.080                  | -0.052             | -0.052                               |
| 2         | 0.367*                  | 0.421*             | 0.421*                               |
| 3         | -0.442*                 | -0.462*            | -0.690*                              |

*Note: \* Small Effect: 0.2 to 0.34, Small to Medium Effect: 0.35 to 0.49, Medium Effect: 0.5 to 0.64, Medium to Large Effect: 0.65 to 0.79, and Large Effect:  $\geq 0.8$  (based in part on Cohen, 1988). A positive d denotes an effect in favor of males within the age group, whereas a negative d denotes an effect in favor for females within the age group.*

The results suggest males and females between 18 and 30 years of age (i.e., age group 1) are of equal skill in networking ability and overall political skill. However, males between 31 and 47 years of age (i.e., age group 2) are more skilled in networking ability and overall political skill than their female counterparts, whereas females between 48 and 66 years of age (i.e., age group 3) are more skilled in these areas than males.

#### **Research Question 4**

Do differences exist among participants of the three age groups within each gender category in their self-assessments of political skill?

The purpose of the fourth research question was to determine if differences exist in political skill among participants of the three age groups within each gender category. Significant interaction effects were indicated in the dimension of networking ability ( $p = 0.021$ ) and networking ability excluding outlier ( $p = 0.006$ ), and overall political skill ( $p = 0.019$ ) (see Table 4.2). Follow-

up tests were conducted for the simple effects of age in each gender group using the .05/2 or .025 level of significance (Maxwell et al., 2004). A summary of the results of the follow-up tests are located in Table 4.5.

Table 4.5

*Results of Follow-up Testing for Age Group Differences in Each Gender Category where Significant Interaction Effects were Indicated*

| Source                                      | Df  | SS      | MS    | F    | P     | eta <sup>2</sup>  |
|---|-----|---------|-------|------|-------|-------------------|
| <i>Networking Ability</i>                   |     |         |       |      |       |                   |
| <i>Gender: Male</i>                         |     |         |       |      |       |                   |
| A: Cluster                                  | 3   | 0.240   | 0.080 | 0.10 | 0.957 | .003              |
| B: Age                                      | 2   | 4.508   | 2.254 | 2.94 | 0.058 | .063 <sup>^</sup> |
| S: Error                                    | 87  | 66.691  | 0.767 |      |       |                   |
| Total                                       | 92  | 71.624  |       |      |       |                   |
| <i>Networking Ability</i>                   |     |         |       |      |       |                   |
| <i>Gender: Female</i>                       |     |         |       |      |       |                   |
| A: Cluster                                  | 3   | 16.561  | 5.520 | 6.11 | 0.001 | .146              |
| B: Age                                      | 2   | 2.392   | 1.196 | 1.32 | 0.277 | .021 <sup>^</sup> |
| S: Error                                    | 105 | 94.922  | 0.904 |      |       |                   |
| Total                                       | 110 | 113.565 |       |      |       |                   |
| <i>Networking Ability excluding outlier</i> |     |         |       |      |       |                   |
| <i>Gender: Male</i>                         |     |         |       |      |       |                   |
| A: Cluster                                  | 3   | 0.240   | 0.080 | 0.10 | 0.957 | .003              |
| B: Age                                      | 2   | 4.508   | 2.254 | 2.94 | 0.058 | .063 <sup>^</sup> |
| S: Error                                    | 87  | 66.691  | 0.767 |      |       |                   |
| Total                                       | 92  | 71.624  |       |      |       |                   |
| <i>Networking Ability excluding outlier</i> |     |         |       |      |       |                   |
| <i>Gender: Female</i>                       |     |         |       |      |       |                   |
| A: Cluster                                  | 3   | 14.034  | 4.678 | 5.64 | 0.001 | .135              |
| B: Age                                      | 2   | 4.124   | 2.061 | 2.48 | 0.088 | .040 <sup>^</sup> |
| S: Error                                    | 104 | 86.334  | 0.831 |      |       |                   |
| Total                                       | 109 | 104.199 |       |      |       |                   |

Note: \* Significance at  $p \leq 0.025$  indicated for B only. <sup>^</sup> eta<sup>2</sup>  $\geq 0.01$  indicated for B only.

Table 4.5

*Results of Follow-up Testing for Age Group Differences in Each Gender Category where Significant Interaction Effects were Indicated (Continued)*

| Source                         | Df  | SS     | MS    | F    | P     | eta <sup>2</sup>  |
|--------------------------------|-----|--------|-------|------|-------|-------------------|
| <i>Political Skill Overall</i> |     |        |       |      |       |                   |
| <i>Gender: Male</i>            |     |        |       |      |       |                   |
| A: Cluster                     | 3   | 3.060  | 1.019 | 3.40 | 0.021 | .096              |
| B: Age                         | 2   | 1.136  | 0.568 | 1.89 | 0.157 | .036 <sup>^</sup> |
| S: Error                       | 87  | 26.080 | 0.300 |      |       |                   |
| Total                          | 92  | 31.851 |       |      |       |                   |
| <i>Political Skill Overall</i> |     |        |       |      |       |                   |
| <i>Gender: Female</i>          |     |        |       |      |       |                   |
| A: Cluster                     | 3   | 8.931  | 2.977 | 9.59 | 0.000 | .209              |
| B: Age                         | 2   | 1.153  | 0.577 | 1.86 | 0.161 | .027 <sup>^</sup> |
| S: Error                       | 105 | 32.600 | 0.310 |      |       |                   |
| Total                          | 110 | 42.711 |       |      |       |                   |

Note: \* Significance at  $p \leq 0.025$  indicated for B only. <sup>^</sup> eta<sup>2</sup>  $\geq 0.01$  indicated for B only.

No significant mean differences were found for the age group factor.

However, age group effects were identified using eta squared. Eta squared is the recommended effect size measure in an ANOVA where the number of groups compared exceeds two and there is a natural ordering among them, as is the case with the age factor (Cortina and Nouri, 2000 and Warner, R., 2007).

The results of the follow-up analyses on the impact of the age factor in each gender category are located in Table 4.6. Small effects were indicated for females in networking ability (eta<sup>2</sup> = .021) and overall political skill (eta<sup>2</sup> = .027), and a small to medium effect for networking ability excluding outlier (eta<sup>2</sup> = .040). A small to medium effect was identified for males in overall political skill (eta<sup>2</sup> =

.036), and medium effects for networking ability ( $\eta^2 = .063$ ) and networking ability excluding outlier ( $\eta^2 = .063$ ).

Table 4.6

*Eta Squared Results for the Impact of Age on Each Gender where Significant Interaction Effects were Identified by Three-Way ANOVA.*

| Gender | Political Skill | Networking Ability | Networking Ability excluding outlier |
|--------|-----------------|--------------------|--------------------------------------|
| Male   | .036*           | .063*              | .063*                                |
| Female | .027*           | .021*              | .040*                                |

*Note: \* Small Effect: .01 to .03, Small to Medium Effect: .031 to .058, Medium Effect: .059 to .091, Medium to Large Effect: .092 to .137, and Large Effect:  $\geq 0.138$  (based in part on Cohen, 1988).*

These results suggest that age group does have an effect on networking ability and overall political skill in each gender category. For networking ability and overall political skill, the mean for males in age group 2 is greater than that of age groups 1 and 3, while the mean for females in age group 3 is greater than that of age groups 1 and 2.

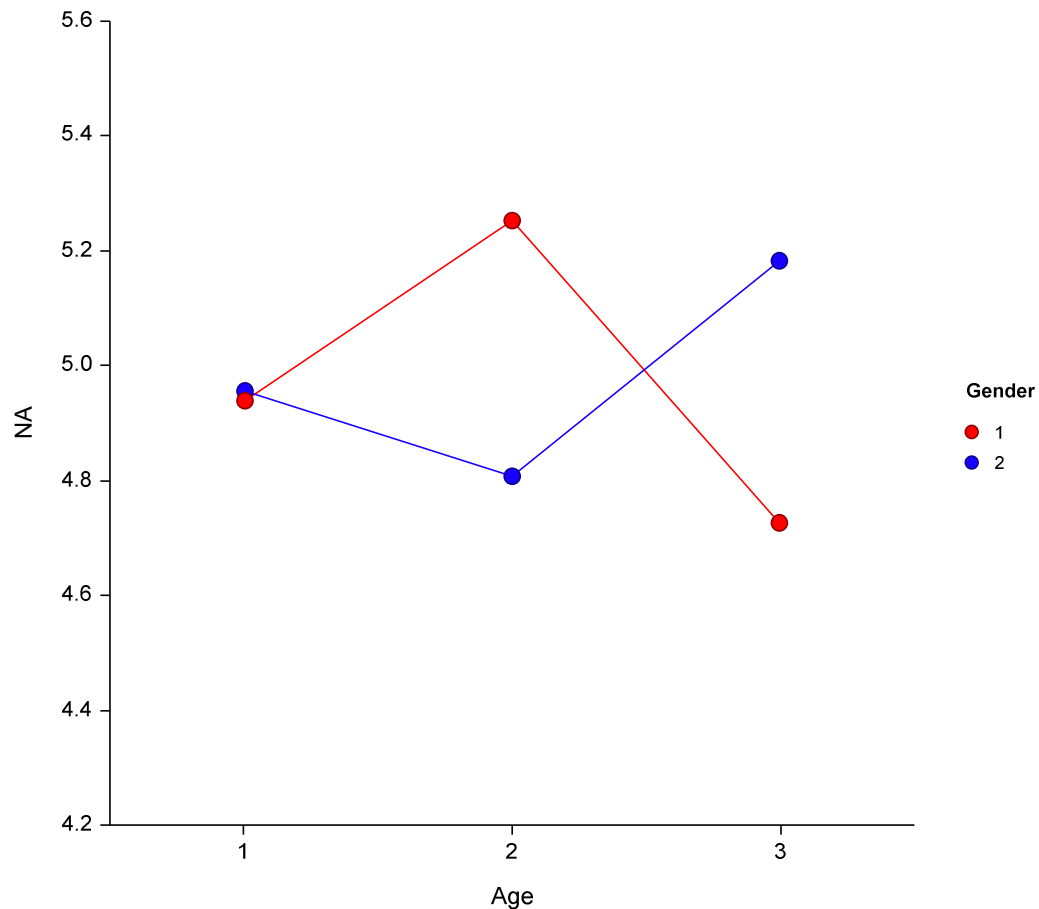
### Review of Means

The means from the omnibus or overall tests by age group and gender where significant interaction effects were indicated are summarized in Table 4.7. The means plots of networking ability (see Figure 4.3), and overall political skill (see Figure 4.4) have been provided to highlight sizable similarities and differences in the mean scores.

Table 4.7

*Mean Scores by Age Group and Gender where Significant Interaction Effects were Identified by Three-Way ANOVA.*

| Age Group/Gender                            | N  | Mean  |
|---|----|-------|
| <i>Political Skill Overall</i>              |    |       |
| Age Group 1 / Male                          | 27 | 5.235 |
| Age Group 1 / Female                        | 36 | 5.293 |
| Age Group 2 / Male                          | 36 | 5.460 |
| Age Group 2 / Female                        | 50 | 5.214 |
| Age Group 3 / Male                          | 30 | 5.196 |
| Age Group 3 / Female                        | 25 | 5.488 |
| <i>Networking Ability</i>                   |    |       |
| Age Group 1 / Male                          | 27 | 4.939 |
| Age Group 1 / Female                        | 36 | 4.955 |
| Age Group 2 / Male                          | 36 | 5.253 |
| Age Group 2 / Female                        | 50 | 4.806 |
| Age Group 3 / Male                          | 30 | 4.728 |
| Age Group 3 / Female                        | 25 | 5.182 |
| <i>Networking Ability excluding outlier</i> |    |       |
| Age Group 1 / Male                          | 27 | 4.940 |
| Age Group 1 / Female                        | 36 | 4.955 |
| Age Group 2 / Male                          | 36 | 5.240 |
| Age Group 2 / Female                        | 50 | 4.798 |
| Age Group 3 / Male                          | 30 | 4.717 |
| Age Group 3 / Female                        | 24 | 5.305 |

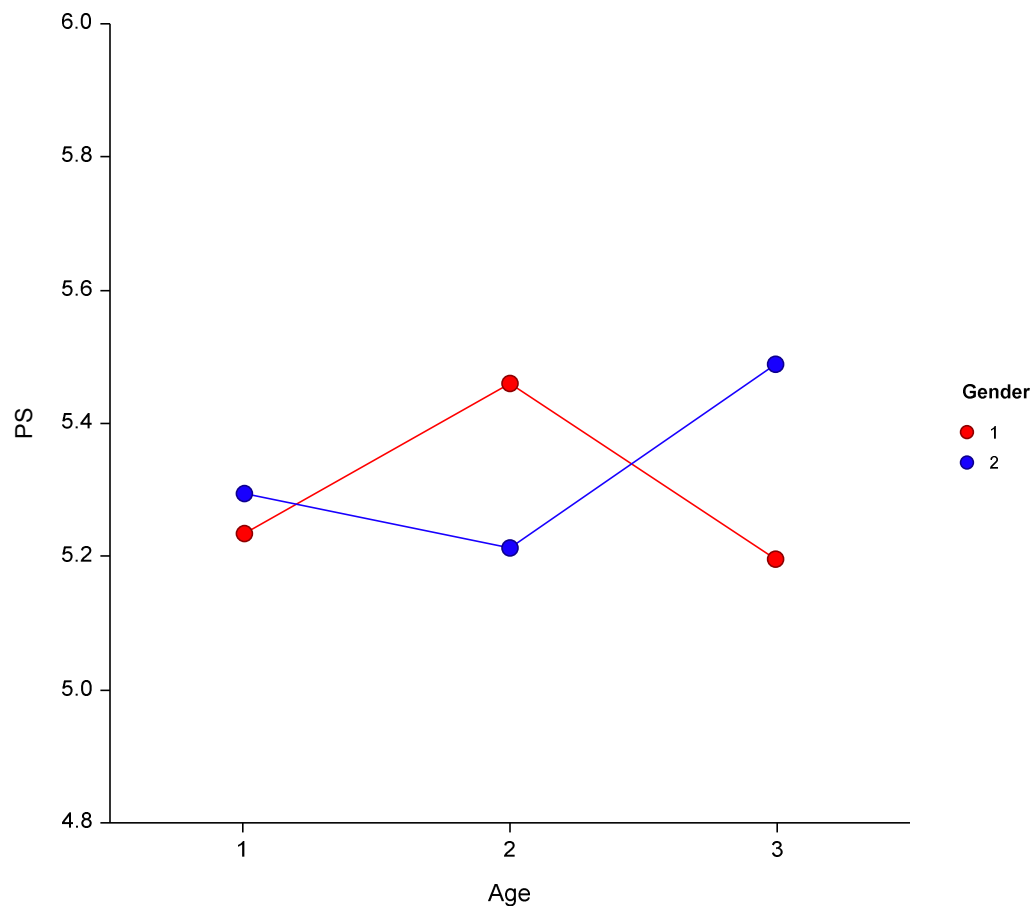


*Figure 4.3.* Means plot of networking ability dimension by gender and age group.

Means plots can be analyzed from both the horizontal and vertical perspectives. From the vertical perspective, one compares the means of male and female participants within each age group. For networking ability (see Figure 4.3), the means between male ( $M = 4.939$ ) and female ( $M = 4.955$ ) participants in age group 1 are nearly identical. Age group 2 reveals a gap between male ( $M = 5.253$ ) and female ( $M = 4.806$ ) participants. For age group 3 the gap between male ( $M = 4.728$ ) and female ( $M = 5.182$ ) participants shifts dramatically.



From a horizontal perspective, one compares the mean of each gender category by age group. For male participants, a significant increase in networking ability is seen from age group 1 ( $M = 4.939$ ) to age group 2 ( $M = 5.253$ ), and a sizable decrease is observed from age group 2 to age group 3 ( $M = 4.728$ ). For female participants, the opposite is observed with a slight decrease from age group 1 ( $M = 4.955$ ) to age group 2 ( $M = 4.806$ ) and a substantial increase from age group 2 to age group 3 ( $M = 5.182$ ).



*Figure 4.4.* Means plot of political skill by gender and age group.

Similarly, for overall political skill (see Figure 4.4), the means between male ( $M = 5.235$ ) and female ( $M = 5.293$ ) participants in age group 1 are nearly

identical. Age group 2 reveals a gap between male ( $M = 5.460$ ) and female ( $M = 5.214$ ) participants. For age group 3 the gap between male ( $M = 5.196$ ) and female ( $M = 5.488$ ) participants shift dramatically. From the horizontal perspective, male participants report a significant increase in overall political skill from age group 1 ( $M = 5.234$ ) to age group 2 ( $M = 5.460$ ), and a sizable decrease from age group 2 to age group 3 ( $M = 5.196$ ). For female participants, the opposite is observed with a slight decrease from age group 1 ( $M = 5.293$ ) to age group 2 ( $M = 5.214$ ), and a substantial increase from age group 2 to age group 3 ( $M = 5.488$ ).

## **CHAPTER 5**

### **DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

The question investigated in the study was whether the individual dispositional factors of gender and age group have an effect on individual political skill. Specifically, this study was designed to determine the following:

1. Do differences exist between males and females in their self-assessments of political skill?
2. Do differences exist among three age groups in their self-assessments of political skill?
3. Do differences exist between male and female participants within each age group in their self-assessments of political skill?
4. Do differences exist among participants of three age groups within each gender category in their self-assessments of political skill?

The dimensions on which this study was focused were networking ability, apparent sincerity, social astuteness, and interpersonal influence. These dimensions make up the four factors of political skill as measured by the eighteen-item Political Skill Inventory (PSI) (Ferris, et al., 2005). A separate rating for each dimension is the mean of various items in the PSI and the overall political skill rating is the mean of all eighteen PSI items. The demographic variables selected for inclusion in this study were drawn from the recommendations of related studies and include age group and gender.

Learn Associates LLC collected the data used for this study from 204 participants of classes, workshops, lectures, or those who were requested to take

the PSI instrument from participants covering the topics of organizational politics and political skill to measure the individuals' political skill level. The sample was a nonrandom and consisted of four clusters of respondents. These clusters were: 1) a society of Certified Public Accountants (CPA), 2) a CPA firm, 3) a bank, and 4) a class of students in educational leadership combined with a *snowball* sample obtained by having the students in the class secure responses to the PSI instrument from co-workers in their various places of employment. The first three clusters were drawn from the banking and finance areas. The students and their associates (comprising cluster 4) who were employed could have been from any organization. Thus, at least 167 out of the sample of 204 or 81.9% were from the banking and finance areas.

The major analytical procedures employed in this study were three-way analysis of variance (ANOVA), F-test, Tukey-Kramer multiple comparison test, standardized mean statistic (d), and eta squared. A .05 level of confidence was used to determine statistical significance in the initial or omnibus testing.

If Research Questions 3 and 4 yielded significant results for interaction, a follow-up ANOVA was conducted using .017 and .025 levels of significance for Research Questions 3 and 4, respectively. Further analysis was conducted for effect size in Research Question 3 using the standardized mean statistic (d). Measurable effect for this analysis was determined using the following ranges: small: 0.2 to 0.34, small to medium: 0.35 to 0.49, medium effect: 0.5 to 0.64, medium to large: 0.65 to 0.79, and large effect: 0.8 (based in part on Cohen, 1988). Further analysis was conducted for Research Question 4 for effect size

using eta squared. Measurable effect for this analysis was determined using the following ranges: small: .01 to .03, small to medium: .031 to .058, medium: .059 to .091, medium to large: .092 to .137, and large: .138 (based in part on Cohen, 1988).

### **Summary of Findings**

The major findings of this study are presented below in order of the research questions being examined.

#### **Research Question 1**

Do differences exist between males and females in their self-assessments of political skill?

- No significant mean differences were indicated for the main effect of gender for the four dimensions of political skill or for political skill overall.

#### **Research Question 2**

Do differences exist among members of the three age groups in their self-assessments of political skill?

- No significant differences were indicated for the main effect of age group for the four dimensions of political skill or for political skill overall.
- A Tukey-Kramer multiple-comparison test detected a difference between age group 1 and age group 3 in apparent sincerity with age group 3 having a greater mean score. However, the effect size was small.

#### **Research Question 3**

Do differences exist between male and female participants within each age group in their self-assessments of political skill? Follow-up tests were

conducted on the dimension of networking ability including and excluding outlier and overall political skill for the gender factor.

- No significant differences were identified for the gender factor within each age group.
- Small to medium effects were identified in favor of males in age group 2 for networking ability, networking ability excluding outlier, and overall political skill.
- Small to medium effects were identified in favor of females in age group 3 for networking ability and overall political skill.
- A medium to large effect was identified in favor of females in age group 3 for networking ability excluding outlier.

#### **Research Question 4**

Do differences exist among participants of the three age groups within each gender category in their self-assessments of political skill? Follow-up tests were conducted on the dimension of networking ability including and excluding outlier and overall political skill for the age group factor.

- No significant differences were identified for the age group factor within each gender category.
- A small to medium age group effect was identified for males in overall political skill.
- Medium age group effects were identified for males in networking ability and networking ability excluding outlier.

- Small age group effects were identified for females in networking and overall political skill.
- A small to medium age group effect was identified for females in networking ability excluding outlier.

### **Discussion of Findings**

This section will focus on a discussion of the findings according to the purpose and goals of the study.

#### **Gender and Political Skill**

One of the major goals of the present research was to examine what effect gender has in the self-assessments of political skill as define by Ferris et al. (2005) using the Political Skill Inventory (PSI). The results of the present study did not support gender alone as a factor that influenced political skill self-assessments. This finding also supports the research of Westbrook et al. (2013), who found no significant gender differences in the self-assessment rating of participants using the Brandon and Seldman Organizational Savvy Self-Assessment. This finding contradicts the stereotypical perspective of gender (Kray, Joshen, Galinsky, & Thompson, 2004) which argue that men and women utilize different methods of behavior to influence others because of the differences in their socialization. Similarly, Cross and Madson (1997) theorized that men are more likely to exhibit behavior that enhances personal status and thus are more political than females. The results of the present study do not support this theory.

One possible explanation for this finding could be the focus on the finance and accounting fields for a majority of the participants. An argument could be made that Certified Public Accountants (CPA) or financial services workers have common experiences and goals, which regardless of gender, require them to acquire certain political skills in order to survive and even thrive. This influence of common experiences could have a larger effect on their acquisition and use of political skill than does the gender factor.

### **Age Group and Political Skill**

Another major goal of the current research was to test for differences between participants of various age groups. Although the present study indicated a difference in apparent sincerity between age groups 1 and 3 using the Tukey-Kramer multiple comparison test, the effect size and the difference in the means between the two age groups were small. Furthermore, a comparison of the means of the two age groups were considered in the high-average to high range indicating that although there was a statistical difference between the groups there is likely not a practical one. Moreover, the omnibus test for comparing the differences among the three groups was not statistically significant.

The present study partially confirms the Social Influence Theory (Levy, Collins, & Nail, 1998). This theory attempts to understand how individuals use their social influence to achieve desired outcomes. At work, employees wish to obtain promotions, salary increases, rewards, and other positive outcomes. In the attempt to obtain these, employees use or see coworkers use political skill



with both positive and negative outcomes. Employees learn from these experiences and as such increase their political skill and awareness. Because these workplace instances happen over time it is reasonable to conclude that older workers (i.e., age group 3) would be at a higher level of political skill. Todd et al. (2009) agree with the social influence theory as it relates to individual political skill when they postulate that one's proficiency in political skill may increase with age as one learns from the outcomes of its usage.

### **Effect of Gender within Age Groups**

Another important goal of the current research was to test for differences between males and females within the various age groups. The results of the present study indicate that males and females between 18 and 30 years of age (i.e., age group 1) are of equal skill in networking ability and overall political skill. However, males between 31 and 47 years of age (i.e., age group 2) are more skilled in networking ability and overall political skill than their female counterparts. Interestingly, the opposite is true for females between 48 and 66 years of age (i.e., age group 3), as they are more proficient in networking ability and overall political skill than males.

The present study may provide partial validation of the Social Role Theory (Eagly, 1987; Eagly, Wood, & Diekmann, 2000), as it postulates that gender differences evolve due to societal power relations and social learning. One could argue that social learning happens to males and females differently at various ages. It is possible that the importance of networking ability and overall political skill is highlighted for males in middle age and for females later in their

career. It is also possible that a realization of the need for political skill comes to light for males during the middle part of their career, whereas females find it later. It is also reasonable to assume that males and females focus on their careers at different times in the lives based on family needs. For example, females in age group 2 may be more likely to be responsible for the care of the family than are males. Furthermore, these results could also be related to the participant's generational group, and may not be replicated by other generational groups as they age.

The finding of the present study tends to contradict past studies which indicate that females are more likely to define themselves in regards to the relationships they make and engage in interpersonal behaviors that support these relationships (Baumeister & Sommer, 1997; Kidder, 2002). It also partially disagrees with the Social Role Theory which suggests that males are more likely to focus on achieving status within organizations instead of developing relationships. The present study does show that males and females rate themselves high in political skill throughout their careers, but are more proficient in the construct at different times during their careers. A

### **Effect of Age Group within Each Gender Categories**

The final goal of the present research was to test for differences between age groups within the various gender categories. The results of the study suggest that age group does have an effect on networking ability and overall political skill in each gender category. Males in age group 2 have a higher mean score for networking ability and overall political skill than males in age groups 1

and 3. Females in age group 3 have a higher mean score for networking ability and overall political skill than females in age groups 1 and 2.

One possible reason for the results of the present study may be social learning. Workers learn from various experiences and as such increase their proficiency in political skill. For females, age group 3 proved to be the highest scoring group in networking ability and overall political skill. For males, age group 2 was the highest scoring group in networking ability and overall political skill. This partially validates the Social Influence Theory (Levy, Collins, & Nail, 1998) and assumptions of Todd et al. (2009) who note that workplace political events happen over time and it is reasonable to conclude that older workers would be at a higher level of political skill because they have increased their proficiency as workplace situations dictate. Since males scored highest in age group 2 it would appear that further research needs to be conducted to determine if this was a result of Social Influence Theory or some undefined factor. The fact that females scored highest in age group 3 provides further validation of the theory.

### **Conclusions**

Although some differences were noted in the results, overall the present study found only limited evidence to support the conclusion that gender and age group independently play a significant role in one's self-assessment of political skill. However, it is worth noting that some evidence exists to indicate gender

and age group factored together can have an effect. For these reasons, the results of the present study suggest the following conclusions:

1. Males and females are of equal ability in political skill.
2. Age group may play a role in one's political skill. Specifically, differences exist between younger workers (i.e., 18 to 30 years of age) and older workers (i.e., 48 to 66 years of age) in the apparent sincerity dimension.
3. Males and females possess different levels of proficiency in political skill at different stages in their careers.

### **Recommendations**

The purpose of this research was to determine to what extent, if any, the dispositional factors of age and gender have on the self-assessments of political skill. The following recommendations are provided to guide future research in this area.

1. It is recommended that similar studies on political skill be undertaken examining other dispositional factors such as race, national origin, etc.
2. It is recommended that similar studies on political skill be undertaken examining situational factors such as organization, occupation, career level, education level, income, etc.
3. It is recommended that the present study be replicated utilizing a larger sample size.
4. It is recommended that future studies be conducted to determine the relative importance of each of the four political skill dimensions on individual and organizational success.

5. It is recommended that future studies utilize qualitative methods to determine the importance of various external factors (i.e., family responsibilities) on political skill.

6. It is recommended that future studies utilize a 360-degree assessment to determine if a bias exists in the self-reporting of political skill utilizing the PSI.

7. It is recommended that future studies examine the practical significance of political skill self-assessment scores. For example, does a participant who has a mean score of 5.2 on the PSI obtain higher compensation or performance rating scores in their employment compared to those who rate 5.0?

## REFERENCES

- Ahern, K. K., Ferris, G. R., Hochwarter, W. A., Douglas, C., & Ammeter, A. P. (2004). Leader political skill and team performance. *Journal of Management*, 30(3), 309-327.
- Allen, R. W., Madison, D. L., Renwick, P. A., Porter, L. W., & Mayes, B. T. (1979). Organizational politics: Tactics and characteristics of its actors. *California Management Review*, 22(1), 77-83.
- Andrews, M. C., Kacmar, K. M., & Harris, K. J. (2009). Got political skill? The impact if justice on the importance of political skill for job performance. *Journal of Applied Psychology*, 1427-1437.
- Aryee, S., Wyatt, T., & Stone, R. (1996). Early career outcomes of graduate employees: The effects of mentoring and ingratiation. *Journal of Management Studies*, 33(1), 95-118.
- Bacharach, S., & Lawler, E. (1998). Political alignments in organizations: Contextualizations, mobilization, and coordination. In R. Kramer, & M. Neale (Eds.), *Power and influence in organizations* (pp. 67-88). Thousand Oaks, CA: Sage Publications.
- Baumeister, R. F., & Sommer, K. L. (1997). What do men want? Gender differences and two spheres of belongingness: Comment on Cross and Madison (1997). *Psychology Bulletin*, 122, 38-44.
- Beeman, D. R., & Sharkey, T. W. (1987, March-April). The use and abuse of corporate politics. *Business Horizons*, pp. 26-30.

- Bhasin, R. (1995). Building good will and partnerships. *Pulp & Paper*, 37(1), 69-81.
- Black, T. R. (1999). *Doing quantitative research in the social sciences: An integrated approach to research design, measurement and statistics*. Thousand Oaks, CA: Sage.
- Blickle, G., & Schnitzler, A. K. (2010). Is the political skill inventory fit for personnel selection? An experimental field study. *International Journal of Selection and Assessment*, 18(2), 155-165.
- Blickle, G., Ferris, G. R., Munyon, T. P., Momm, T., Zettler, I., Schneider, P. B., & Buckley, M. R. (2011). A multi-source, multi-study investigation of job performance prediction by political skill. *Applied Psychology*, 60(3), 449-474.
- Bolman, L. G., & Deal, T. E. (2003). *Reframing organizations: Artistry, choice, and leadership*. San Francisco, CA.: Jossey-Bass.
- Bozeman, D. P., Hochwarter, W. A., Perrewe, P. L., & Brymer, R. A. (2001). Organizational politics, perceived control and work outcomes: Bountry conditions on the effects of politics'. *Journal of Applied Social Psychology*, 31(3), 486-503.
- Brandon, R., & Seldman, M. (2004). *Survival of the savvy: High-integrity political tactics for career and company success*. New York, NY: Free Press.
- Buchanan, D. A. (2008). You stab my back, I'll stab yours: Management experience and perceptions of organization political behavior. *British Journal of Management*, 19, 49-64.

- Cardillo, D. (2007). *With office politics, it's smart to be savvy*. Retrieved February 2, 2009, from Cardillo & Associates:  
<http://www.dcardillo.com/articles/politics.html>
- Clarke, J. (1999). *Office politics: A survival guide*. Sterling, VA: Stylus Publishing, Inc.
- Cobb, A. T., & Margulies, N. (1981). Organization development: a political perspective. *The Academy of Management Review*, 49-59.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Mahwah, NJ.: Lawrence Erlbaum Associates, Inc.
- Comrey, A.L. and Lee, H.B. (1992). *A first course in factor analysis*. Hillsdale, NJ: Lawrence Erlbaum.
- Conner, D. S. (2006). Human-resources professionals' perceptions of organizational politics as a function of experience, organizational size, and perceived independence. *The Journal of Social Psychology*, 146(6), 717-732.
- Cortina, J., & Nouri, H. (2000). *Effect Size for ANOVA Design*. Thousand Oaks, CA.: Sage Publications.
- Cropanzano, R., Howes, J. C., Grandey, A. A., & Toth, P. (1997). The relationship of organizational politics and support to work behaviors, attitudes, and stress. *Journal of Organizational Behavior*, 159-180.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construal and gender. *Psychology Bulletin*, 122, 5-37.



- Davis, W. D., & Gardner, W. L. (2004). Perceptions of politics and organizational cynicism: An attributional and leader-member exchange perspective. *Leadership Quarterly*, 15, 439-465.
- DeLuca, J. (1999). *Political savvy: Systematic approaches to leadership behind-the-scenes*. Berwyn, PA: Evergreen Business Group.
- Dhar, R. L. (2009). Living with organizational politics: An exploration of employee's behavior. *International Journal of Management and Innovation*, 37-56.
- Douglas, C., & Ammeter, A. P. (2004). An examination of leader political skill and its effect on ratings of leader effectiveness. *Leadership Quarterly*, 15(4), 537-550.
- Drory, A. (1993). Perceived political climate and job attitudes. *Organization Studies*, 59-71.
- DuBrin, A. J. (1990). *Winning office politics: DuBrin's guide for the 90's*. Paramus, NJ: Prentice-Hall, Inc.
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.
- Eagly, A. H., Wood, W., & Diekmann, A. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes, & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Erlbaum.

- Fedor, D. B., & Maslyn, J. M. (2002). Politics and political behavior: Where else do we go from here? In F. Dansereau, & F. J. Yammarino (Eds.), *Research in Multi-Level Issues* (Vol. 1, pp. 287-294). Oxford, UK: Elsevier Science/JAI Press.
- Fedor, D. B., Ferris, G. R., Harrell-Cook, G., & Russ, G. S. (1998). The dimensions of politics perceptions and their organizational and individual predictors. *Journal of Applied Social Psychology, 28*, 1762-1799.
- Fedor, D., Maslyn, J., Farmer, S., & Bettenhausen, K. (2008). The contribution of positive politics to the prediction of employee reactions. *Journal of Applied Social Psychology, 38*(1), 76-96.
- Ferris, G. R., & Kacmar, K. M. (1992). Perceptions of organizational politics. *Journal of Management, 18*(1), 93-116.
- Ferris, G. R., Adams, G. L., Kolodinsky, R. W., Hochwarter, W. A., & Ammeter, A. P. (2002). Perceptions of organizational politics: Theory and research directions. In F. J. Yammarino, & F. Dansereau (Eds.), *Research in Multi-Level Issues* (pp. 179-254). Oxford, England: JAI Press.
- Ferris, G. R., Berkson, H. M., Kaplan, D. M., Gilmore, D. C., Buckley, M. R., & Hochwarter, W. A. (1999). *Development and initial validation of the political skill inventory*. Chicago, IL: Paper presented at the 59th annual national meeting of the Academy of Management.
- Ferris, G. R., Blickle, G., Schneider, P., Kramer, J., Zettler, I., Solga, J., . . . Meurs, J. (2008). Political skill construct and criterion-related validation: A two-study investigation. *Journal of Managerial Psychology, 23*, 744-771.

- Ferris, G. R., Davidson, S. L., & Perrewe, P. L. (2005). *Political Skill at Work*. Mountain View, CA: Davies-Black Publishing.
- Ferris, G. R., Fedor, D. B., Chachere, J. G., & Pondy, L. R. (1989). Myth system implications for performance appraisal system development and implementation. *Group and Organization Studies*, 83-103.
- Ferris, G. R., Hochwarter, W. A., Douglas, C., Blass, R., Kolodinsky, R. W., & Treadway, D. C. (2002). Social influence processes in organizations and human resources systems. In G. R. Ferris, & J. J. Martocchio (Eds.), *Research in personnel and human resources management* (Vol. 21, pp. 65-127). Oxford: JAI Press/Elsevier Science.
- Ferris, G. R., Perrewe, P. L., & Douglas, C. (2002). Social effectiveness in organizations: Construct validity and research directions. *Journal of Leadership and Organizational Studies*, 49-63.
- Ferris, G. R., Rogers, L. M., Blass, F. R., & Hochwarter, W. A. (2009). Interaction of job-limiting pain and political skill on job satisfaction and organizational citizenship behavior. *Journal of Managerial Psychology*, 24(7), 584-608.
- Ferris, G. R., Russ, G. S., & Fandt, P. M. (1989). Politics in organizations. In R. A. Giacalone, & P. Rosenfield (Eds.), *Impression management in the organization* (pp. 143-170). Hillsdale, NJ: Erlbaum.
- Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J., Douglas, C., & Frink, D. D. (2005). Development and validation of the political skills inventory. *Journal of Management*, 31(1), 126-152.

- Ferris, G., Frink, D. D., Bhawuk, D. P., Zhou, J., & Gilmore, D. C. (1996). Reactions of diverse groups to politics in the workplace. *Journal of Management*, 23-44.
- Fisher, R. (1970). *Statistical Methods for Research Workers* (14th ed.). Darien, CT: Hafner Publishing Company.
- Gandz, J., & Murray, V. V. (1980). The experience of workplace politics. *Academy of Management Journal*, 237-251.
- Gentry, W. A., Gilmore, D. C., Shuffler, M. L., & Leslie, J. B. (2012). Political skill as an indicator of promotability among multiple rater sources. *Journal of Organizational Behavior*, 33, 89-104.
- Gilley, J. W. (2006). *The manager as politician*. Westport, CT: Praeger.
- Gilmore, D. C., Ferris, G. R., Dulebohn, J., & Harrell-Cook, G. (1996). Organizational politics and employee attendance. *Group & Organizational Management*, 21, 481-494.
- Glass, G. V., McGaw, B., & Smith, M. L. (1981). *Meta-analysis in Social Research*. Beverly Hills, CA.: Sage Publications.
- Gotsis, G. N., & Kortezi, Z. (2010). Ethical considerations in organizational politics: Expanding the perspective. *Journal of Business Ethics*, 93, 497-517.
- Harrell-Cook, G., Ferris, G. R., & Dulebohn, J. H. (1999). Political behaviors as moderators of the perceptions of organizational politics-work outcomes relationships. *Journal of Organizational Behavior*, 20(7), 1093-1105.

- Harvey, P., Harris, R. B., Harris, K. J., & Wheeler, A. R. (2007). Attenuating the effects of social stress: The impact of political skill. *Journal of Occupational Health Psychology, 12*(2), 105-115.
- Hathaway, D. (1992). The political office. *CMA: The Management Accounting Magazine*, p. 35.
- Hochwarter, W. (2003). The interactive effects of pro-political behavior and politics perceptions on job satisfaction and affective commitment. *Journal of Applied Social Psychology, 33*, 1360-1378.
- Hochwarter, W., & Thompson, K. (2010). The moderating role of optimism on politics-outcomes relationships: A test of competing perspectives. *Human Relations, 63*, 1-24.
- Huang, J. E., Chuang, C. J., & Lin, H. (2003). The role of burnout in the relationship between perceptions of organizational politics and turnover intentions. *Public Personnel Management, 32*, 519-530.
- Jawahar, I., Meurs, J., Ferris, G. R., & Hochwarter, W. (2008). Self-efficacy and political skill as comparative predictors of task and contextual performance: a two-study constructive replication. *Human Performance, 21*, 1-20.
- Judge, T., & Bretz, R. (1994). Political influence behavior and career success. *Journal of Management, 43*-65.

- Kacmar, K. M., & Baron, R. A. (1999). Organizational politics: The state of the field, links to related processes, and an agenda for future research. In G. R. Ferris (Ed.), *Research in human resources management* (Vol. 17, pp. 1-39). Stamford, CT: Elsevier Science/JAI Press.
- Kacmar, K. M., & Ferris, G. R. (1991). Perceptions of organizational politics scale (POPS): Development and construct validation. *Educational and Psychological Measurement*, 193-205.
- Kacmar, K. M., Bachrach, D. G., Harris, K. J., & Zivnuska, S. (2011). Fostering good citizenship through ethical leadership: Exploring the moderating role of gender and organizational politics. *Journal of Applied Psychology*, 96(3), 633-642.
- Kacmar, K. M., Bozeman, D. P., Carlson, D. S., & Anthony, W. P. (1999). An Examination of the Perceptions of Organizational Politics Model: Replication and Extension. *Human Relations*, 52, 383-415.
- Kanter, R. M. (1983). *The change masters: Innovation and entrepreneurship in the American corporation*. New York: Simon & Schuster.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.
- Kidder, D. L. (2002). The influence of gender on the performance of organizational citizenship behaviors. *Journal of Management*, 28, 629-648.

- Kipnis, D., & Schmidt, S. M. (1988). Upward-influence styles: Relationship with performance evaluations, salary, and stress. *Administrative Science Quarterly*, 33(4), 528-542.
- Kirchmeyer, C. (1990). A profile of managers active in office politics. *Basic and Applied Social Psychology*, 11(3), 339-356.
- Kolodinsky, R., Treadway, D., & Ferris, G. R. (2007). Political skill and influence effectiveness: Testing portions of the expanded Ferris and Judge (1991) model. *Human Relations*, 60, 1747-1778.
- Kray, L. J., Jochen, R., Galinsky, A. D., & Thompson, L. (2004). Stereotype reactance at the bargaining table: The effect of stereotype activation and power on claiming and creating value. *Personality and Social Psychology Bulletin*, 30, 399-411.
- Kumar, P., & Ghadially, R. (1989). Organisational politics and its effects on members of organisations. *Human Relations*, 42, 305-314.
- Levy, D. A., Collins, B. E., & Nail, P. R. (1998). A new model of interpersonal influence characteristics. *Journal of Social Behavior and Personality*, 715-733.
- Lien, B. Y-H. (2005). Gender, power, and office politics. *Human Resource Development International*, 8(3), 293-309.
- Maxwell, S. E., & Delaney, H. D. (2004). *Designing Experiments and Analyzing Data: A Model Comparison Perspective* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

- McIntyre, M. G. (2005). *Secrets to winning at office politics: How to achieve your goals and increase your influence at work*. New York, NY: St. Martin's Griffin.
- Medina, F. J., Povedano, A., Martinez, I., & Munduate, L. (2009). How do we approach accountability with our constituency? Gender differences in the use of influence tactics. *International Journal of Conflict Management*, 20(1), 46-59.
- Meurs, J. A., Perrewe, P. L., & Ferris, G. R. (2011). Political skill as moderator of the trait sincerity-task performance relationship: A socioanalytic narrow trait perspective. *Human Performance*, 24, 119-134.
- Miller, B. K., Rutherford, M. A., & Kolodinsky, R. W. (2008). Perceptions of organizational politics: A meta-analysis of outcomes. *Journal of Business Psychology*, 22, 209-222.
- Miller, R. (1986). *Beyond ANOVA: Basics of applied statistics*. New York: John Wiley & Sons
- Mintzberg, H. (1983). *Power in and around organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Mintzberg, H. (1985). The organization as political arena. *Journal of Management Studies*, 22(2), 133-154.
- Murray, V., & Gandz, J. (2001, December). Games executives play: Politics at work. *Business Horizons*, 12, pp. 11-23.
- Ng, T., Eby, L., Sorensen, K., & Feldman, D. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58, 367-408.



- Nielsen, R. P. (1996). *The politics of ethics: Methods for acting, learning, and sometimes fighting with others in addressing ethics problems in organizational life*. New York: Oxford University Press.
- Nunnally, J.C. (1978). *Psychometric theory* (2nd Ed), New York: McGraw-Hill.
- O'Conner, W. E., & Morrison, T. G. (2001). A comparison of situational and dispositional predictors of perceptions of organizational politics. *The Journal of Psychology*, 301-312.
- Othman, R. (2008). Organisational politics: The role of justice, trust and job ambiguity. *Singapore Management Review*, 30(1), 43-53.
- Peled, A. (2000). Politicking for success. *Leadership & Organisation Development Journal*, 21(1-2), 20-29.
- Perrewe, P. L., & Nelson, D. L. (2004). Gender and career success: The facilitative role of political skill. *Organizational Dynamics*, 33(4), 366-378.
- Perrewe, P. L., Ferris, G. R., Frink, D., & Anthony, W. (2000). Political skill: An antidote for workplace stressors. *Academy of Management Executives*, 14, 115-123.
- Perrewe, P. L., Zellars, K. L., Rossi, A. M., Ferris, G. R., Kacmar, C. J., Liu, Y., . . . Hochwarter, W. A. (2005). Political skill: An antidote in the role overload-strain relationship. *Journal of Occupational Health Psychology*, 10(3), 239-250.
- Pfeffer, J. (1981). *Power in organizations*. Boston: Pitman.

- Phipps, S. T. (2012). Contributors to an enterprising gender: Examining the influence of creativity on entrepreneurial intentions and the moderating role of political skill controlling for gender. *Academy of Entrepreneurship Journal*, 18(1), 77-90.
- Pichault, F. (1995). The management of politics in technically related organizational change. *Organization Studies*, 3, 449-460.
- Pinto, J. K. (1997). Make politics work for you. *Research-Technology Management*, pp. 9-10.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. -Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Poon, J. (2003). Situational antecedents and outcomes of organisational politics and perceptions. *Journal of Managerial Psychology*, 18(2), 138-155.
- Porter, L. W., Allen, R. W., & Angle, H. L. (1981). The politics of upward influence in organizations. In L. L. Cummings, & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 3, pp. 109-149). Greenwich, CT: JAI.
- Randall, M., Cropanzano, R., Bormann, C., & Birjulin, A. (1999). Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. *Journal of Organizational Behavior*, 20, 159-174.
- Reardon, K. K. (2000). *The secret handshake: Mastering the politics of the business inner circle*. New York, NY: Currency Doubleday.

- Reardon, K. K. (2005). *It's all politics: Winning in a world where hard work and talent aren't enough*. New York, NY: Doubleday Business.
- Reardon, K. K. (2007). Courage as a skill. *Harvard Business Review*, 58-64.
- Richardson, J. T. E. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review*, 6(2), 135-147.
- Rosen, C. C., Harris, K. J., & Kacmar, K. M. (2009). The emotional implications of organizational politics: A process model. *Human Relations*, 62(1), 27-57.
- Rosen, C., Levy, P. E., & Hall, R. J. (2006). Placing perceptions of politics in the context of the feedback environment, employee attitudes, and job performance. *Journal of Applied Psychology*, 91(1), 211-220.
- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, 845-874.
- Semadar, A., Robins, G., & Ferris, G. R. (2006). Comparing the validity of multiple social effectiveness constructs in the prediction of managerial job performance. *Journal of Organizational Behavior*, 27, 443-461.
- Shaughnessy, B. A., Treadway, D. C., Breland, J. A., Williams, L. V., & Brouer, R. L. (2011). Influence and promotability: The importance of female political skill. *Journal of Managerial Psychology*, 26(7), 584-603.
- Shultz, K.S. and Whitney, D.J. (2005). *Measurement theory in action: Case studies and exercises*. Thousand Oaks, CA: Sage Publications, Inc.

- Todd, S. Y., Harris, K. J., Harris, R. B., & Wheeler, A. R. (2009). Career success implications of political skill. *The Journal of Social Psychology, 149*(3), 179-204.
- Tolbize, A. (2008). *Generational Differences in the Workplace*. Minneapolis, MN: Research and Training Center on Community Living at the University of Minnesota.
- Treadway, D. C., Hochwarter, W. A., Ferris, G. R., Kacmar, C. J., Douglas, C., Ammeter, A. P., & Buckley, M. R. (2004). Leader political skill and employee reactions. *The Leadership Quarterly, 15*, 493-513.
- Treadway, D. C., Hochwarter, W. A., Kacmar, C. J., & Ferris, G. R. (2005). Political will, political skill, and political behavior. *Journal of Organizational Behavior, 26*, 229-245.
- Treadway, D. C., Hochwarter, W., Ferris, G. R., Kacmar, C. J., Douglas, C., & Ammeter, A. P. (2004). Leader political skill and employee reactions. *Leadership Quarterly, 15*, 493-513.
- Truty, D. (2006). *Political savvy: Elusive and Vital*. A paper presented at Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, St. Louis, MO.
- Valle, M., & Witt, L. A. (2001). The moderating effect of teamwork perceptions on the organizational politics-job satisfaction relationship. *Journal of Social Psychology, 141*(3), 379-388.
- Vigoda, E. (2000). Internal politics in public administration systems. *Public Personnel Management, 18*, 185-210.

- Vigoda, E. (2001). Reactions to organizational politics: A cross-cultural examination in Israel and Britain. *Human Relations*, 54(11), 1483-1518.
- Vigoda, E. (2002). Stress-related aftermaths to workplace politics: The relationships among politics, job distress, and aggressive behavior in organizations. *Journal of Organizational Behavior*, 23, 571-591.
- Warner, R. M. (2007). *Applied Statistics: From Bivariate Through Multivariate Techniques*. Thousand Oaks, CA.: Sage Publications.
- Warren, D. (2003). Constructive and destructive deviance in organizations. *Academy of Management Review*, 28, 622-632.
- Wayne, S. J., & Green, S. A. (1993). The effects of leader-member exchange on employee citizenship and impression management behavior. *Human Relations*, 46, 1431-1440.
- Westbrook, T. S., Veale, J. R., & Karnes, R. E. (2013). Multirater and gender differences in the measurement of political skill in organizations. *Journal of Leadership Studies*, 7(1), 6-17.
- Winer, B. (1971). *Statistical Principles in Experimental Design* (2nd ed.). New York, NY: McGraw-Hill.
- Yagil, D. (2001). Ingratiation and assertiveness in the service provider-customer dyad. *Journal of Service Research*, 3(4), 345-353.

**APPENDIX A**

**THE POLITICAL SKILL INVENTORY**

## DEMOGRAPHICS

Instructions: Below each question, please select the answer that best describes you.

1. Which category below includes your age?
  - a. 17 or younger
  - b. 18-30
  - c. 31-47
  - d. 48-66
  - e. 67-87
2. What is your gender?
  - a. Male
  - b. Female

## POLITICAL SKILL INVENTORY

Instructions: Using the following scale, please place the number on the blank after each item that best describes how much you agree with each statement about yourself.

- 1 = *Strongly Disagree*  
 2 = *Disagree*  
 3 = *Slightly Disagree*  
 4 = *Neutral*  
 5 = *Slightly Agree*  
 6 = *Agree*  
 7 = *Strongly Agree*

1. \_\_\_\_ I spend a lot of time and effort at work networking with others.
2. \_\_\_\_ I am able to make people feel comfortable and at ease around me.
3. \_\_\_\_ I am able to communicate easily and effectively with others.
4. \_\_\_\_ It is easy for me to develop good rapport with most people.
5. \_\_\_\_ I understand people very well.
6. \_\_\_\_ I am good at building relationships with influential people at work.
7. \_\_\_\_ I am able particularly good at sensing the motivations and hidden agendas of others.

8. \_\_\_\_\_ When communicating with others, I try to be genuine in what I say and do.
9. \_\_\_\_\_ I have developed a large network of colleagues and associates at work who I can call on for support when I really need to get things done.
10. \_\_\_\_\_ At work, I know a lot of important people and am well connected.
11. \_\_\_\_\_ I spend a lot of time at work developing connections with others.
12. \_\_\_\_\_ I am good at getting people to like me.
13. \_\_\_\_\_ It is important that people believe I am sincere in what I say and do.
14. \_\_\_\_\_ I try to show genuine interest in other people.
15. \_\_\_\_\_ I am good at using my connections and network to make things happen at work.
16. \_\_\_\_\_ I have good intuition and am savvy about how to present myself to others.
17. \_\_\_\_\_ I always seem to instinctively know the right things to say or do to influence others.
18. \_\_\_\_\_ I pay close attention to people's facial expressions.



**APPENDIX B**

**FACTOR STRUCTURE ANALYSIS OUTPUT**

4/17/2014 2:14:14 PM 1

**Factor Analysis Report**

Dataset

C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Descriptive Statistics Section**

| Variables | Count | Mean     | Standard<br>Deviation | Communality |
|-----------|-------|----------|-----------------------|-------------|
| Q1        | 204   | 4.720588 | 1.34471               | 0.450252    |
| Q2        | 204   | 5.627451 | 0.9249851             | 0.338539    |
| Q3        | 204   | 5.578432 | 0.9357305             | 0.373594    |
| Q4        | 204   | 5.661765 | 0.9355112             | 0.453382    |
| Q5        | 204   | 5.303922 | 0.9703914             | 0.362327    |
| Q6        | 204   | 5.014706 | 1.116283              | 0.496502    |
| Q7        | 204   | 4.794117 | 1.218399              | 0.463048    |
| Q8        | 204   | 6.181373 | 0.9371617             | 0.684041    |
| Q9        | 204   | 5.240196 | 1.246138              | 0.544392    |
| Q10       | 204   | 4.838235 | 1.367573              | 0.643074    |
| Q11       | 204   | 4.602941 | 1.276615              | 0.689058    |
| Q12       | 204   | 5.063725 | 1.078613              | 0.432375    |
| Q13       | 204   | 6.151961 | 0.9528005             | 0.507382    |
| Q14       | 204   | 5.97549  | 0.8563799             | 0.416624    |
| Q15       | 204   | 4.921568 | 1.142                 | 0.575943    |
| Q16       | 204   | 5.093137 | 1.099105              | 0.508623    |
| Q17       | 204   | 4.578432 | 1.215145              | 0.486787    |
| Q18       | 204   | 5.406863 | 1.138728              | 0.230442    |

**Correlation Section**

| Variables | Variables<br>Q1 | Q2       | Q3       | Q4       | Q5       |
|-----------|-----------------|----------|----------|----------|----------|
| Q1        | 1.000000        | 0.220851 | 0.168227 | 0.198614 | 0.223952 |
| Q2        | 0.220851        | 1.000000 | 0.375409 | 0.417243 | 0.280431 |
| Q3        | 0.168227        | 0.375409 | 1.000000 | 0.444064 | 0.196048 |
| Q4        | 0.198614        | 0.417243 | 0.444064 | 1.000000 | 0.357980 |
| Q5        | 0.223952        | 0.280431 | 0.196048 | 0.357980 | 1.000000 |
| Q6        | 0.396557        | 0.229562 | 0.199323 | 0.268947 | 0.368757 |
| Q7        | 0.283423        | 0.093333 | 0.087687 | 0.180626 | 0.319837 |
| Q8        | -0.037767       | 0.305640 | 0.216822 | 0.295068 | 0.264095 |
| Q9        | 0.395957        | 0.236142 | 0.252027 | 0.327795 | 0.212273 |
| Q10       | 0.505685        | 0.232507 | 0.208212 | 0.238101 | 0.271084 |
| Q11       | 0.646706        | 0.199504 | 0.090116 | 0.117979 | 0.241044 |
| Q12       | 0.467445        | 0.285598 | 0.256144 | 0.226506 | 0.419103 |
| Q13       | 0.029458        | 0.226646 | 0.309793 | 0.279009 | 0.146935 |
| Q14       | -0.010254       | 0.218510 | 0.269820 | 0.303189 | 0.222407 |
| Q15       | 0.415507        | 0.224026 | 0.079543 | 0.297812 | 0.190533 |
| Q16       | 0.274336        | 0.247496 | 0.277853 | 0.241587 | 0.352061 |
| Q17       | 0.277266        | 0.056803 | 0.046552 | 0.120952 | 0.247053 |
| Q18       | 0.119645        | 0.252181 | 0.212617 | 0.236173 | 0.351174 |

Phi=0.297656 Log(Det|R)=-7.048639 Bartlett Test=1382.71 DF=153 Prob=0.000000

**Factor Analysis Report**

Dataset

C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Correlation Section**

| Variables  | Variables<br>Q6 | Variables<br>Q7 | Variables<br>Q8 | Variables<br>Q9 | Variables<br>Q10 |
|--|-----------------|-----------------|-----------------|-----------------|------------------|
| Q1   | 0.396557        | 0.283423        | -0.037767       | 0.395957        | 0.505685         |
| Q2   | 0.229562        | 0.093333        | 0.305640        | 0.236142        | 0.232507         |
| Q3   | 0.199323        | 0.087687        | 0.216822        | 0.252027        | 0.208212         |
| Q4   | 0.268947        | 0.180626        | 0.295068        | 0.327795        | 0.238101         |
| Q5   | 0.368757        | 0.319837        | 0.264095        | 0.212273        | 0.271084         |
| Q6   | 1.000000        | 0.447734        | -0.026106       | 0.397616        | 0.521089         |
| Q7   | 0.447734        | 1.000000        | -0.057734       | 0.100866        | 0.343552         |
| Q8   | -0.026106       | -0.057734       | 1.000000        | 0.118584        | -0.038493        |
| Q9   | 0.397616        | 0.100866        | 0.118584        | 1.000000        | 0.560563         |
| Q10  | 0.521089        | 0.343552        | -0.038493       | 0.560563        | 1.000000         |
| Q11  | 0.533003        | 0.400072        | 0.023433        | 0.434929        | 0.561206         |
| Q12  | 0.391985        | 0.414462        | 0.144455        | 0.256100        | 0.387731         |
| Q13  | -0.002111       | 0.039813        | 0.586863        | 0.081128        | -0.052872        |
| Q14  | 0.087981        | 0.037630        | 0.508878        | 0.176338        | 0.080721         |
| Q15  | 0.425975        | 0.338834        | 0.151442        | 0.508306        | 0.613211         |
| Q16  | 0.388338        | 0.415350        | 0.136558        | 0.188595        | 0.321415         |
| Q17  | 0.367756        | 0.440176        | -0.006065       | 0.145277        | 0.376731         |
| Q18  | 0.278169        | 0.263053        | 0.212089        | 0.166854        | 0.229103         |
| Phi=0.297656 Log(Det R)=-7.048639 Bartlett Test=1382.71 DF=153 Prob=0.000000 |                 |                 |                 |                 |                  |

| Variables  | Variables<br>Q11 | Variables<br>Q12 | Variables<br>Q13 | Variables<br>Q14 | Variables<br>Q15 |
|--|------------------|------------------|------------------|------------------|------------------|
| Q1   | 0.646706         | 0.467445         | 0.029458         | -0.010254        | 0.415507         |
| Q2   | 0.199504         | 0.285598         | 0.226646         | 0.218510         | 0.224026         |
| Q3   | 0.090116         | 0.256144         | 0.309793         | 0.269820         | 0.079543         |
| Q4   | 0.117979         | 0.226506         | 0.279009         | 0.303189         | 0.297812         |
| Q5   | 0.241044         | 0.419103         | 0.146935         | 0.222407         | 0.190533         |
| Q6   | 0.533003         | 0.391985         | -0.002111        | 0.087981         | 0.425975         |
| Q7   | 0.400072         | 0.414862         | 0.039813         | 0.037630         | 0.338834         |
| Q8   | 0.023433         | 0.144455         | 0.586863         | 0.508878         | 0.151442         |
| Q9   | 0.434929         | 0.256100         | 0.081128         | 0.176338         | 0.508306         |
| Q10  | 0.561206         | 0.387731         | -0.052872        | 0.080721         | 0.613211         |
| Q11  | 1.000000         | 0.394103         | 0.041750         | 0.009078         | 0.563087         |
| Q12  | 0.394103         | 1.000000         | 0.187057         | 0.247017         | 0.384001         |
| Q13  | 0.041750         | 0.187057         | 1.000000         | 0.463414         | 0.051753         |
| Q14  | 0.009078         | 0.247017         | 0.463414         | 1.000000         | 0.189431         |
| Q15  | 0.563087         | 0.384001         | 0.051753         | 0.189431         | 1.000000         |
| Q16  | 0.345968         | 0.447893         | 0.141649         | 0.138510         | 0.213854         |
| Q17  | 0.469511         | 0.332550         | -0.033746        | 0.013691         | 0.409138         |
| Q18  | 0.128618         | 0.211406         | 0.051701         | 0.247695         | 0.172394         |
| Phi=0.297656 Log(Det R)=-7.048639 Bartlett Test=1382.71 DF=153 Prob=0.000000 |                  |                  |                  |                  |                  |

**Factor Analysis Report**

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**Correlation Section**

| Variables | Variables<br>Q16 | Q17       | Q18      |
|-----------|------------------|-----------|----------|
| Q1        | 0.274336         | 0.277266  | 0.119645 |
| Q2        | 0.247496         | 0.056803  | 0.252181 |
| Q3        | 0.277853         | 0.046552  | 0.212617 |
| Q4        | 0.241587         | 0.120952  | 0.236173 |
| Q5        | 0.352061         | 0.247053  | 0.351174 |
| Q6        | 0.388338         | 0.367756  | 0.278169 |
| Q7        | 0.415350         | 0.440176  | 0.263053 |
| Q8        | 0.136558         | -0.006065 | 0.212089 |
| Q9        | 0.188595         | 0.145277  | 0.166854 |
| Q10       | 0.321415         | 0.376731  | 0.229103 |
| Q11       | 0.345968         | 0.469511  | 0.128618 |
| Q12       | 0.447893         | 0.332550  | 0.211406 |
| Q13       | 0.141649         | -0.033746 | 0.051701 |
| Q14       | 0.138510         | 0.013691  | 0.247695 |
| Q15       | 0.213854         | 0.409138  | 0.172394 |
| Q16       | 1.000000         | 0.531164  | 0.288382 |
| Q17       | 0.531164         | 1.000000  | 0.145927 |
| Q18       | 0.288382         | 0.145927  | 1.000000 |

Phi=0.297656 Log(Det|R)=-7.048639 Bartlett Test=1382.71 DF=153 Prob=0.000000

**Eigenvalues after Varimax Rotation**

| No. | Eigenvalue | Individual<br>Percent | Cumulative<br>Percent | Scree Plot |
|-----|------------|-----------------------|-----------------------|------------|
| 1   | 2.886838   | 33.30                 | 33.30                 |            |
| 2   | 1.735188   | 20.01                 | 53.31                 |            |
| 3   | 2.321782   | 26.78                 | 80.09                 |            |
| 4   | 1.712574   | 19.75                 | 99.84                 |            |
| 5   | 0.374737   | 4.32                  | 104.17                |            |
| 6   | 0.240238   | 2.77                  | 106.94                |            |
| 7   | 0.168114   | 1.94                  | 108.88                |            |
| 8   | 0.137058   | 1.58                  | 110.46                |            |
| 9   | 0.098787   | 1.14                  | 111.60                |            |
| 10  | 0.036827   | 0.42                  | 112.02                |            |
| 11  | -0.029103  | -0.34                 | 111.69                |            |
| 12  | -0.045479  | -0.52                 | 111.16                |            |
| 13  | -0.066569  | -0.77                 | 110.39                |            |
| 14  | -0.124128  | -1.43                 | 108.96                |            |
| 15  | -0.137248  | -1.58                 | 107.38                |            |
| 16  | -0.177220  | -2.04                 | 105.34                |            |
| 17  | -0.197564  | -2.28                 | 103.06                |            |
| 18  | -0.265001  | -3.06                 | 100.00                |            |

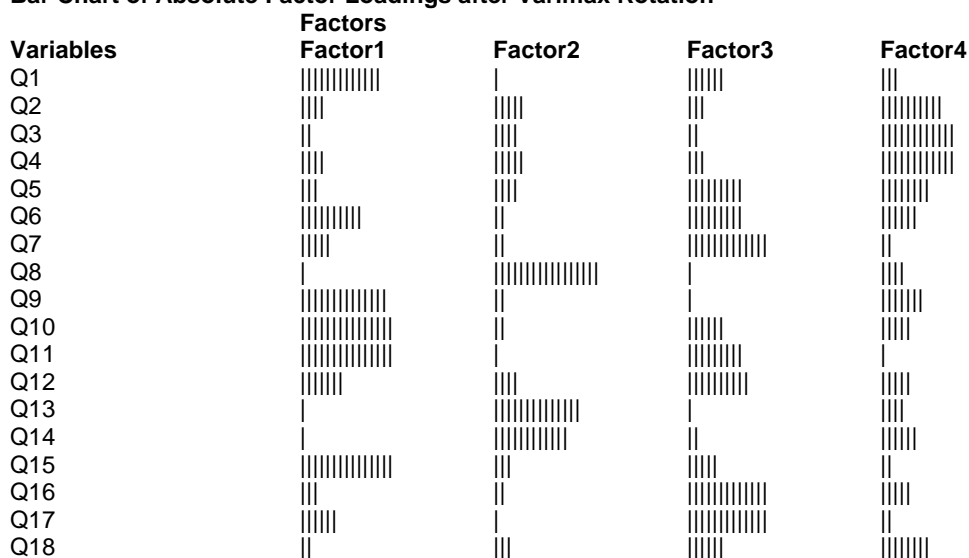
**Factor Analysis Report**

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**Factor Loadings after Varimax Rotation**

| Variables | Factors   |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
|           | Factor1   | Factor2   | Factor3   | Factor4   |
| Q1        | -0.600419 | -0.043584 | 0.269694  | 0.122944  |
| Q2        | -0.181416 | 0.223999  | 0.101243  | 0.495178  |
| Q3        | -0.087674 | 0.198476  | 0.077133  | 0.566184  |
| Q4        | -0.184936 | 0.243097  | 0.104404  | 0.590918  |
| Q5        | -0.121179 | 0.166625  | 0.421878  | 0.376693  |
| Q6        | -0.463552 | -0.087464 | 0.443499  | 0.277993  |
| Q7        | -0.210013 | -0.051550 | 0.639640  | 0.084533  |
| Q8        | 0.007234  | 0.805326  | 0.014428  | 0.187698  |
| Q9        | -0.659558 | 0.072412  | -0.034533 | 0.320840  |
| Q10       | -0.713255 | -0.097632 | 0.262980  | 0.235905  |
| Q11       | -0.722834 | 0.021750  | 0.404515  | -0.049630 |
| Q12       | -0.324100 | 0.169526  | 0.493452  | 0.234734  |
| Q13       | 0.021535  | 0.689381  | 0.033988  | 0.174688  |
| Q14       | -0.044671 | 0.580587  | 0.054811  | 0.273025  |
| Q15       | -0.705665 | 0.145234  | 0.229193  | 0.066021  |
| Q16       | -0.129727 | 0.093418  | 0.649070  | 0.248547  |
| Q17       | -0.291560 | -0.013635 | 0.630056  | -0.067989 |
| Q18       | -0.065393 | 0.108082  | 0.292401  | 0.359146  |

**Bar Chart of Absolute Factor Loadings after Varimax Rotation**

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**Factor Analysis Report**

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**Communalities after Varimax Rotation**

| Variables | Factors  |          |          |          | Communality |
|-----------|----------|----------|----------|----------|-------------|
|           | Factor1  | Factor2  | Factor3  | Factor4  |             |
| Q1        | 0.360502 | 0.001900 | 0.072735 | 0.015115 | 0.450252    |
| Q2        | 0.032912 | 0.050175 | 0.010250 | 0.245201 | 0.338539    |
| Q3        | 0.007687 | 0.039393 | 0.005949 | 0.320565 | 0.373594    |
| Q4        | 0.034201 | 0.059096 | 0.010900 | 0.349184 | 0.453382    |
| Q5        | 0.014684 | 0.027764 | 0.177981 | 0.141898 | 0.362327    |
| Q6        | 0.214880 | 0.007650 | 0.196692 | 0.077280 | 0.496502    |
| Q7        | 0.044106 | 0.002657 | 0.409139 | 0.007146 | 0.463048    |
| Q8        | 0.000052 | 0.648549 | 0.000208 | 0.035231 | 0.684041    |
| Q9        | 0.435017 | 0.005243 | 0.001193 | 0.102938 | 0.544392    |
| Q10       | 0.508732 | 0.009532 | 0.069158 | 0.055651 | 0.643074    |
| Q11       | 0.522489 | 0.000473 | 0.163633 | 0.002463 | 0.689058    |
| Q12       | 0.105041 | 0.028739 | 0.243495 | 0.055100 | 0.432375    |
| Q13       | 0.000464 | 0.475247 | 0.001155 | 0.030516 | 0.507382    |
| Q14       | 0.001996 | 0.337082 | 0.003004 | 0.074542 | 0.416624    |
| Q15       | 0.497962 | 0.021093 | 0.052529 | 0.004359 | 0.575943    |
| Q16       | 0.016829 | 0.008727 | 0.421291 | 0.061776 | 0.508623    |
| Q17       | 0.085007 | 0.000186 | 0.396971 | 0.004622 | 0.486787    |
| Q18       | 0.004276 | 0.011682 | 0.085498 | 0.128986 | 0.230442    |

**Factor Structure Summary after Varimax Rotation**

| Factor1 | Factors |         |         | Factor4 |
|---------|---------|---------|---------|---------|
|         | Factor2 | Factor3 | Factor4 |         |
| Q11     | Q8      | Q16     | Q4      |         |
| Q10     | Q13     | Q7      | Q3      |         |
| Q15     | Q14     | Q17     | Q2      |         |
| Q9      |         | Q12     |         |         |
| Q1      |         | Q6      |         |         |
| Q6      |         | Q5      |         |         |
|         |         | Q11     |         |         |

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**Factor Analysis Report**

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**Factor Score after Varimax Rotation**

| <b>Factors</b> |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|
| <b>Row</b>     | <b>Factor1</b> | <b>Factor2</b> | <b>Factor3</b> | <b>Factor4</b> |
| 1              | 0.5923         | 0.0180         | -1.9095        | 1.2349         |
| 2              | -0.2219        | -0.0108        | -0.9599        | 0.1375         |
| 3              | 0.0561         | 0.9404         | 0.2756         | 0.8729         |
| 4              | -1.0314        | -0.3497        | -0.7105        | 0.8696         |
| 5              | -0.8668        | -0.3894        | 0.1872         | 0.6090         |
| 6              | 0.2860         | 0.4983         | 0.6717         | 0.3121         |
| 7              | -0.9159        | 0.5295         | -0.1074        | 0.9195         |
| 8              | 0.2409         | 0.4280         | 1.4976         | 0.5336         |
| 9              | -0.2547        | 1.0834         | 0.6721         | 0.4917         |
| 10             | 2.0769         | 1.1088         | -1.8967        | -1.0531        |
| 11             | 0.2393         | 0.5913         | 0.1120         | 0.6336         |
| 12             | -1.9331        | 0.7705         | 0.4186         | 0.7446         |
| 13             | 0.0779         | 1.1815         | 0.0820         | -0.1192        |
| 14             | -0.7413        | -0.6429        | -1.4392        | 0.0079         |
| 15             | 0.4137         | -1.0565        | -0.3804        | 1.3475         |
| 16             | 1.8707         | -0.4765        | 0.3690         | 0.1180         |
| 17             | -0.8600        | -0.4910        | -0.2825        | 0.8928         |
| 18             | -0.4712        | 1.4716         | 1.1220         | -0.5249        |
| 19             | -0.5325        | -0.6633        | 0.0129         | 0.1222         |
| 20             | 2.6527         | 0.4893         | -1.0808        | -0.0420        |
| 21             | -0.0602        | 0.1484         | -2.6258        | -0.0576        |
| 22             | 1.0667         | 0.2152         | -2.0315        | -1.6698        |
| 23             | -0.1579        | 0.8984         | 0.1332         | -0.9018        |
| 24             | -0.0951        | 0.8201         | 0.5828         | 0.3034         |
| 25             | 1.2261         | -0.4944        | -0.2180        | 1.3839         |
| 26             | 0.0695         | 0.1911         | -0.5114        | -0.1681        |
| 27             | 0.7502         | 0.6393         | -0.6947        | 0.5345         |
| 28             | -0.1533        | 0.3989         | 1.4824         | 0.3759         |
| 29             | 3.8278         | 1.3806         | 0.3810         | 1.0218         |
| 30             | 1.0749         | 0.0261         | -2.0671        | 0.6303         |
| 31             | -1.1180        | 0.2090         | 1.0518         | -0.8732        |
| 32             | 0.9739         | 0.4023         | -2.3512        | -0.1929        |
| 33             | 0.0079         | -0.2224        | -0.7403        | 0.4945         |
| 34             | -0.0874        | 1.4668         | -0.4691        | 0.2374         |
| 35             | 0.4868         | 0.3687         | 1.7507         | -1.1896        |
| 36             | 0.0207         | -0.5579        | 0.5940         | 0.7327         |
| 37             | -0.4165        | 0.7244         | 0.9253         | 0.1948         |
| 38             | -0.1755        | -2.0419        | -2.0591        | 0.2979         |
| 39             | -0.2815        | 1.2193         | 0.9507         | 0.2702         |
| 40             | 2.5006         | -0.1601        | -1.0979        | -0.4263        |
| 41             | -0.0862        | 0.3732         | -0.1384        | -1.4171        |
| 42             | -1.5478        | 1.4775         | -2.4931        | -0.3049        |
| 43             | 0.9758         | -0.3550        | 0.8518         | -1.6575        |
| 44             | -0.0313        | 0.7331         | 1.1587         | 0.8404         |
| 45             | -1.1770        | -0.3513        | -2.3971        | -0.5158        |
| 46             | -0.9462        | -0.3710        | -0.9365        | -1.0248        |
| 47             | -1.0690        | 1.1010         | -1.6751        | -1.6384        |
| 48             | 4.7897         | 1.0546         | 2.3380         | 0.5709         |
| 49             | 0.5310         | 0.9162         | -0.6829        | 0.0458         |
| 50             | 0.1724         | -0.2991        | -0.5428        | 0.2069         |

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**Factor Analysis Report**

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**Factor Score after Varimax Rotation**

| <b>Factors</b> |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|
| <b>Row</b>     | <b>Factor1</b> | <b>Factor2</b> | <b>Factor3</b> | <b>Factor4</b> |
| 51             | 0.5792         | 0.6432         | -1.1880        | 0.1158         |
| 52             | -0.5695        | 1.4217         | -0.4960        | -0.0464        |
| 53             | 1.6916         | -0.0369        | 0.3059         | 1.2440         |
| 54             | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 55             | -0.9861        | -0.4924        | -1.1849        | 0.6991         |
| 56             | 2.7787         | 0.1941         | -0.4843        | -3.4031        |
| 57             | 1.3268         | 0.4064         | -0.8862        | -2.0043        |
| 58             | 0.3764         | 0.6815         | -0.2793        | -0.3343        |
| 59             | -0.1302        | 0.4467         | 1.1846         | 0.0735         |
| 60             | 0.6519         | 0.7479         | -0.5354        | 0.0005         |
| 61             | 0.8949         | 0.4059         | -1.4579        | 0.7071         |
| 62             | -1.3114        | 0.9819         | -0.3940        | -0.2286        |
| 63             | 0.0006         | -0.2317        | 0.1952         | 0.4215         |
| 64             | 2.6562         | -1.7169        | 1.9573         | 1.1258         |
| 65             | 0.0687         | 1.4344         | -1.1831        | -1.4854        |
| 66             | -0.4609        | -0.0221        | -3.1550        | -0.0296        |
| 67             | 3.2854         | 1.6436         | 0.6919         | -0.0468        |
| 68             | 2.1505         | 0.2807         | -2.4325        | -0.5899        |
| 69             | -0.2691        | -0.2339        | -2.8061        | 1.8392         |
| 70             | -1.5107        | 0.1325         | 0.2553         | 0.9454         |
| 71             | -3.4543        | 0.9365         | -1.7888        | -0.7219        |
| 72             | -0.5926        | 0.7554         | 0.5524         | 0.4292         |
| 73             | -0.6878        | 1.3258         | 1.2238         | 0.1360         |
| 74             | -0.9908        | 0.9457         | -1.2746        | -0.0348        |
| 75             | 1.5869         | 0.0773         | 1.1857         | 0.8715         |
| 76             | -0.8273        | 1.3422         | 0.9069         | -0.0948        |
| 77             | -0.1578        | 0.9293         | -0.2658        | -0.0135        |
| 78             | 3.4715         | 0.1466         | 1.0467         | 1.4511         |
| 79             | -0.8926        | 0.0668         | 0.7268         | -0.4011        |
| 80             | 1.3261         | -1.3208        | -1.7988        | -0.2261        |
| 81             | -1.0317        | 0.8448         | 0.5645         | 0.1417         |
| 82             | -1.2289        | 1.1597         | 0.5426         | 0.7530         |
| 83             | -0.3207        | -0.8354        | 0.0618         | 1.6077         |
| 84             | 0.4417         | -2.4895        | -1.3871        | 2.2465         |
| 85             | 0.1928         | 2.1311         | 0.4396         | -2.9362        |
| 86             | -1.5097        | 1.0135         | -4.1207        | 2.0068         |
| 87             | -0.4209        | 1.4032         | 0.2554         | -3.3946        |
| 88             | -0.3694        | 1.9744         | 0.4081         | -2.8013        |
| 89             | -0.4003        | 1.7660         | 0.4084         | -2.2478        |
| 90             | -2.3298        | 0.7239         | -0.6843        | 2.0823         |
| 91             | -0.1892        | -0.7719        | -0.6928        | 1.8811         |
| 92             | 1.1922         | -0.5826        | 0.2691         | 1.7454         |
| 93             | 0.5585         | -0.7702        | -1.6607        | 1.6169         |
| 94             | 0.0064         | 1.7071         | 0.3549         | -1.6811        |
| 95             | -0.1776        | 1.9873         | 0.5487         | -2.7568        |
| 96             | 0.6603         | 0.9196         | -2.1316        | 0.7550         |
| 97             | 1.2258         | 0.3512         | -2.0687        | 3.3571         |
| 98             | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 99             | -0.3207        | -0.8354        | 0.0618         | 1.6077         |
| 100            | 0.6968         | -1.2773        | -0.1151        | 2.6456         |



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**Factor Score after Varimax Rotation**

| <b>Factors</b> |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|
| <b>Row</b>     | <b>Factor1</b> | <b>Factor2</b> | <b>Factor3</b> | <b>Factor4</b> |
| 101            | 0.2479         | -0.9269        | 0.6309         | 1.6677         |
| 102            | 0.2479         | -0.9269        | 0.6309         | 1.6677         |
| 103            | 0.4386         | -0.8163        | -0.9251        | 1.6523         |
| 104            | 0.3338         | 0.9499         | -0.1286        | -0.6296        |
| 105            | -0.1368        | 1.2224         | -0.9880        | -1.3674        |
| 106            | 0.1989         | 0.3188         | -0.5219        | -0.8452        |
| 107            | -0.2512        | 1.3501         | 0.1210         | -2.9426        |
| 108            | -0.3694        | 1.9744         | 0.4081         | -2.8013        |
| 109            | 0.0064         | 1.7071         | 0.3549         | -1.6811        |
| 110            | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 111            | -0.2010        | -0.5765        | 1.3769         | 0.6898         |
| 112            | 0.6785         | 1.0826         | -0.0976        | -0.4354        |
| 113            | 0.0047         | 1.0106         | -0.3466        | -1.9560        |
| 114            | -0.3762        | 1.4289         | 0.0073         | -3.1826        |
| 115            | -0.3630        | 1.6648         | 0.2908         | -1.7372        |
| 116            | 0.1572         | 0.3578         | -3.0381        | 2.9016         |
| 117            | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 118            | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 119            | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 120            | -0.8425        | -0.2694        | 1.2081         | 0.2975         |
| 121            | 0.2479         | -0.9269        | 0.6309         | 1.6677         |
| 122            | 1.2835         | 0.6749         | 0.2196         | 0.3272         |
| 123            | -0.3630        | 1.6648         | 0.2908         | -1.7372        |
| 124            | 0.3739         | 1.5154         | -0.4776        | -0.9828        |
| 125            | -1.5600        | 1.0177         | -2.5782        | 2.7619         |
| 126            | -0.5360        | -0.9142        | 0.2881         | -0.7232        |
| 127            | -1.3070        | -1.4388        | -0.0745        | -1.9015        |
| 128            | -0.2417        | -1.0370        | 0.0563         | -0.4065        |
| 129            | 0.6749         | -1.5568        | 1.2008         | -0.4834        |
| 130            | -0.7704        | -3.5025        | 0.0792         | -0.2313        |
| 131            | -0.2861        | -1.8402        | -0.3150        | -1.2921        |
| 132            | 0.5273         | -2.2525        | -0.4142        | 0.9200         |
| 133            | 0.0399         | -1.9076        | -0.0655        | -0.1618        |
| 134            | -1.4009        | 0.6210         | -0.4347        | -1.8386        |
| 135            | -1.3866        | 0.6015         | 0.3696         | -2.8089        |
| 136            | -0.3542        | -2.8118        | -1.2802        | -0.0939        |
| 137            | 0.5965         | -2.6096        | 0.2845         | -0.2931        |
| 138            | 1.2614         | -3.1689        | 1.6495         | -0.9669        |
| 139            | -0.9159        | -1.5087        | 0.1627         | -1.1194        |
| 140            | -1.0305        | 0.1645         | 0.1040         | -0.8766        |
| 141            | 0.0282         | -1.7377        | -0.0036        | -1.0898        |
| 142            | 0.6189         | -3.7219        | 0.7480         | -0.6037        |
| 143            | -0.9364        | -1.9377        | -0.0791        | -1.0939        |
| 144            | -0.0031        | -0.7454        | 0.1106         | -0.7920        |
| 145            | 0.2191         | -0.8942        | 1.6589         | -1.3939        |
| 146            | -0.1487        | -1.2823        | -0.0140        | 0.1631         |
| 147            | 0.2058         | -2.5574        | 0.1123         | -0.2905        |
| 148            | -0.4398        | -0.6993        | 1.0447         | -1.3427        |
| 149            | -0.4207        | -0.0485        | 0.3426         | -0.3821        |
| 150            | -0.1000        | -1.3638        | 0.8317         | 0.7661         |

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**Factor Analysis Report**

Dataset

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**Factor Score after Varimax Rotation**

| Row | Factor1 | Factor2 | Factor3 | Factor4 |
|-----|---------|---------|---------|---------|
| 151 | -1.2393 | -1.7445 | 0.3767  | -1.9252 |
| 152 | -1.2923 | -1.4535 | -0.8643 | -2.3739 |
| 153 | 0.3207  | -0.5150 | -1.3196 | 0.6543  |
| 154 | -0.7515 | -1.5716 | -0.6851 | -0.3244 |
| 155 | -0.0869 | -0.9900 | 1.0817  | -1.6001 |
| 156 | 0.5422  | -2.2459 | 0.2038  | 0.2890  |
| 157 | 0.0887  | -2.4862 | 0.6045  | -1.1778 |
| 158 | -0.7120 | -1.0749 | 0.4446  | -2.5081 |
| 159 | -0.0716 | -0.1282 | -0.6011 | -1.0972 |
| 160 | 0.8854  | -1.2861 | 0.8853  | -1.7607 |
| 161 | 0.5351  | -0.0565 | 0.9392  | -1.8652 |
| 162 | -0.7767 | -1.1612 | -0.5630 | -0.8302 |
| 163 | -1.1126 | -2.9407 | -0.7113 | 1.9019  |
| 164 | 0.2894  | -2.8504 | 0.0928  | 1.5069  |
| 165 | -0.7740 | -1.2919 | -0.6404 | -1.0370 |
| 166 | -0.4877 | -0.5573 | 0.0906  | -0.5904 |
| 167 | -0.9600 | -0.6371 | 0.7774  | -0.0760 |
| 168 | 1.9594  | -0.3616 | 2.7071  | -0.0374 |
| 169 | -0.5458 | -0.0727 | -0.5102 | 0.2651  |
| 170 | 0.5836  | 1.4154  | 0.0941  | 0.0559  |
| 171 | -0.9873 | -0.4459 | 1.0270  | 0.8295  |
| 172 | -0.3859 | 0.3690  | -0.1931 | -0.1743 |
| 173 | -0.0730 | 0.3961  | 1.7246  | 0.2526  |
| 174 | -0.2323 | 0.9032  | 2.4183  | 1.5451  |
| 175 | 0.1483  | 0.0670  | 0.7542  | 2.2514  |
| 176 | -0.4247 | 1.0537  | -0.1537 | 0.8120  |
| 177 | -1.4121 | 1.6451  | 1.4968  | -1.0884 |
| 178 | -0.2378 | -1.1729 | -1.9427 | 1.4206  |
| 179 | -2.1695 | -0.4609 | 0.2486  | 0.4822  |
| 180 | -1.4174 | 1.4488  | 0.4409  | -0.1167 |
| 181 | -0.4793 | 0.5120  | 1.1897  | 2.2218  |
| 182 | 0.2438  | 0.8594  | 0.4120  | 0.8799  |
| 183 | -1.0849 | 0.9122  | 0.8026  | -0.3552 |
| 184 | 1.6477  | 0.7081  | 2.4947  | 1.5475  |
| 185 | -0.5725 | 0.8885  | -1.8602 | 0.5330  |
| 186 | 0.4406  | 1.0790  | 1.9305  | 1.4665  |
| 187 | -1.6001 | 0.9401  | 1.9061  | 1.1588  |
| 188 | 2.1027  | 1.0175  | 1.4604  | -0.4772 |
| 189 | -0.5628 | -0.7131 | 0.1423  | 1.9275  |
| 190 | -0.6592 | 0.1962  | -0.6245 | 1.5425  |
| 191 | -0.7605 | 0.0937  | 1.0968  | 0.8233  |
| 192 | -1.7266 | -0.1116 | -1.5999 | 1.7752  |
| 193 | 0.4139  | 1.0217  | -1.4005 | -0.1047 |
| 194 | 1.9411  | -0.9896 | 1.4902  | 1.3659  |
| 195 | -1.3720 | 1.2950  | 0.1795  | -1.0415 |
| 196 | 0.1484  | 1.4186  | 1.0416  | 0.1713  |
| 197 | 0.9593  | -0.7618 | 0.1808  | 0.4281  |
| 198 | 2.2736  | -0.5395 | 0.7056  | 0.1538  |
| 199 | -0.6830 | 0.2055  | 1.0557  | 0.1428  |
| 200 | -0.6725 | 1.3005  | 0.5309  | 0.2601  |

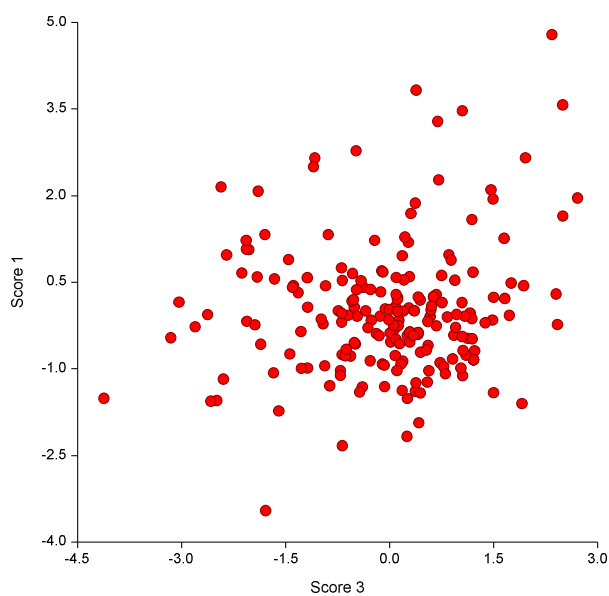
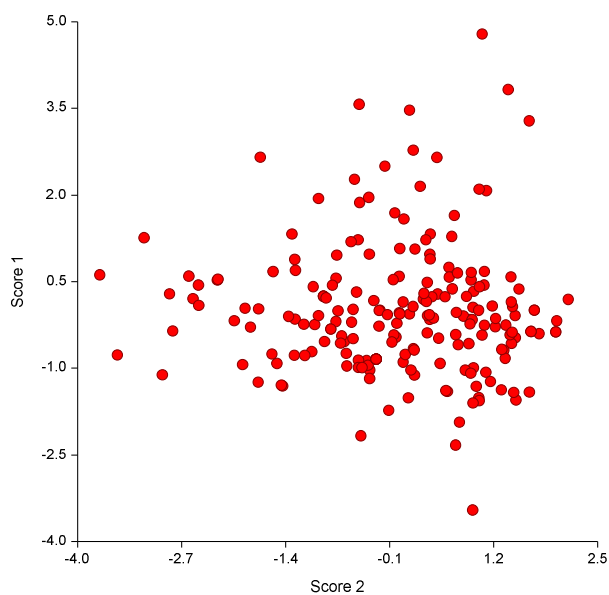
**Factor Analysis Report**

Dataset

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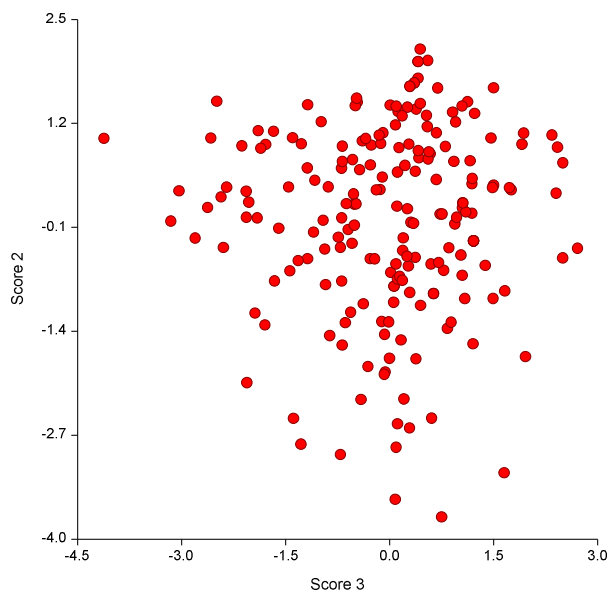
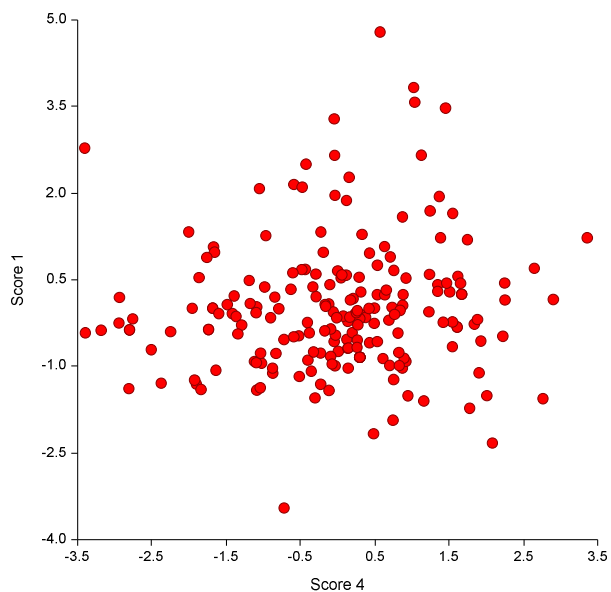
**Factor Score after Varimax Rotation**

| Row | Factors |         |         |         |
|-----|---------|---------|---------|---------|
|     | Factor1 | Factor2 | Factor3 | Factor4 |
| 201 | -0.0369 | 0.0188  | -0.6915 | 0.2649  |
| 202 | -0.0570 | 0.0265  | 0.9644  | 1.2276  |
| 203 | 3.5728  | -0.4822 | 2.4933  | 1.0368  |
| 204 | 0.2973  | 0.3275  | 2.3978  | 1.3445  |

**Plots Section**

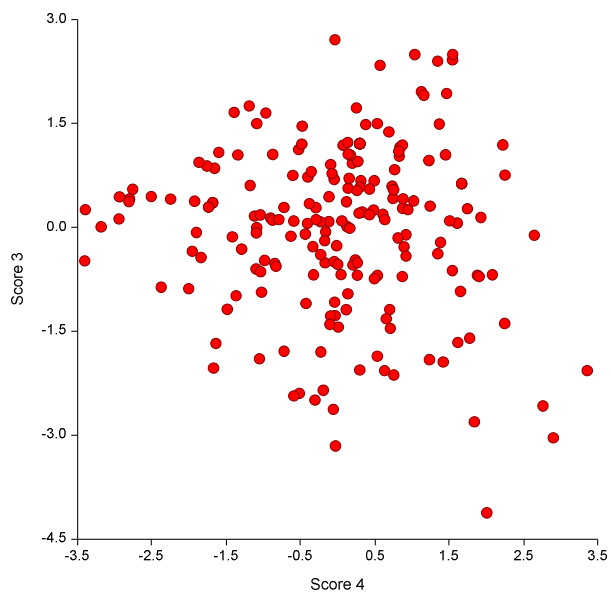
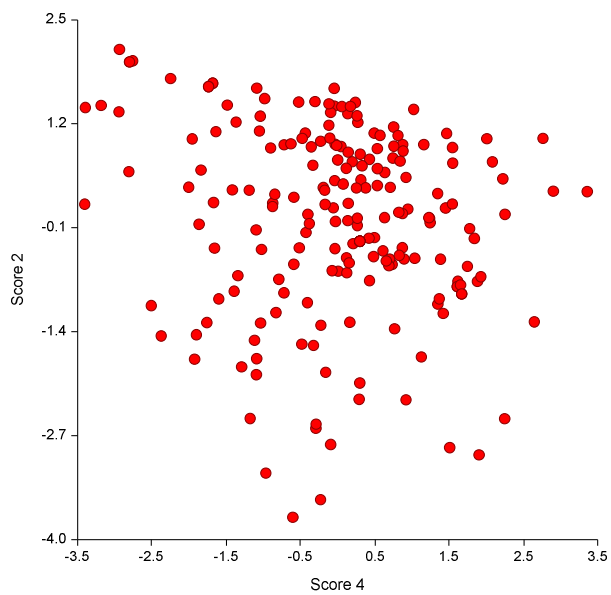
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**Factor Analysis Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



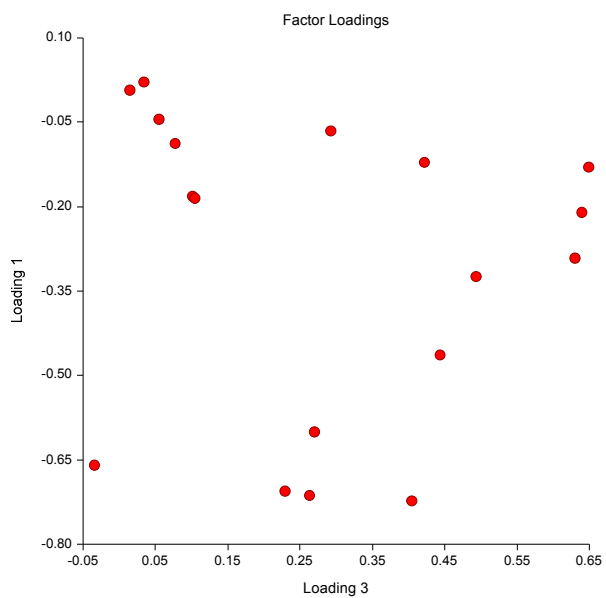
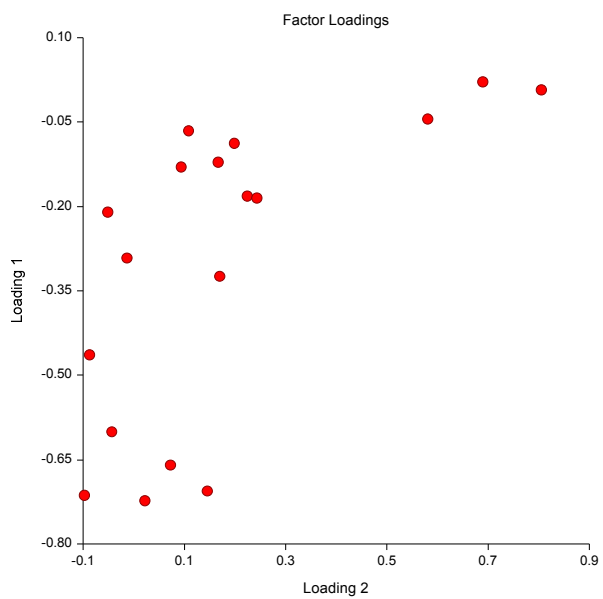
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**Factor Analysis Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

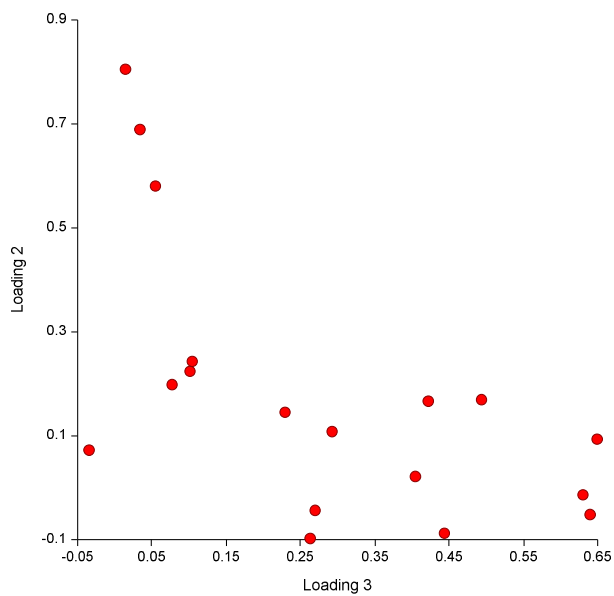
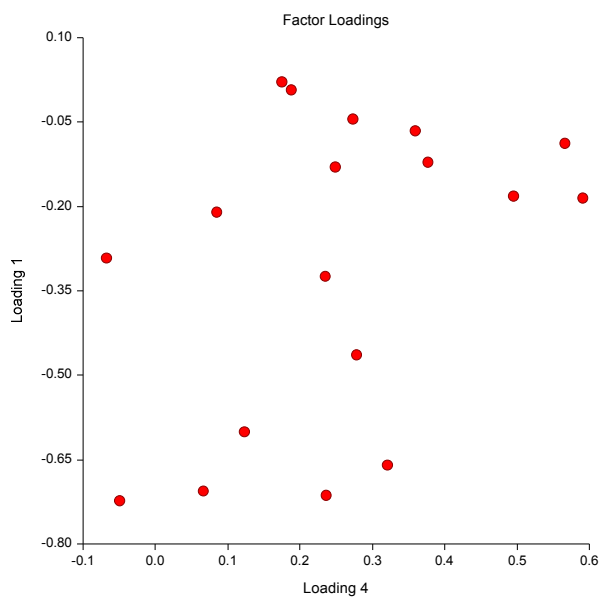


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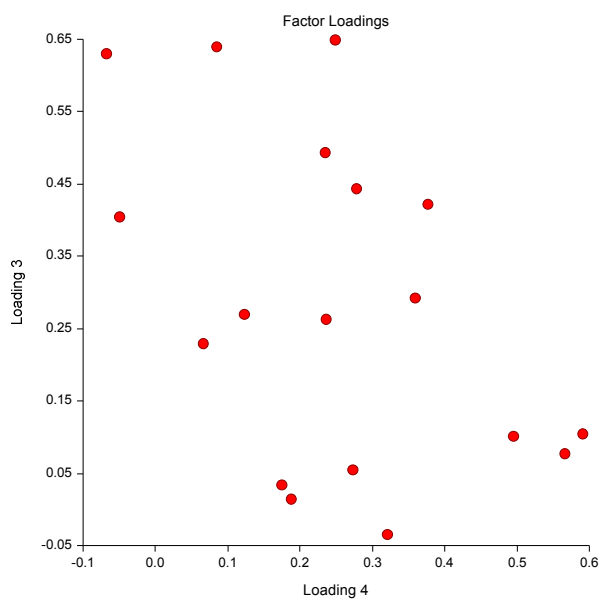
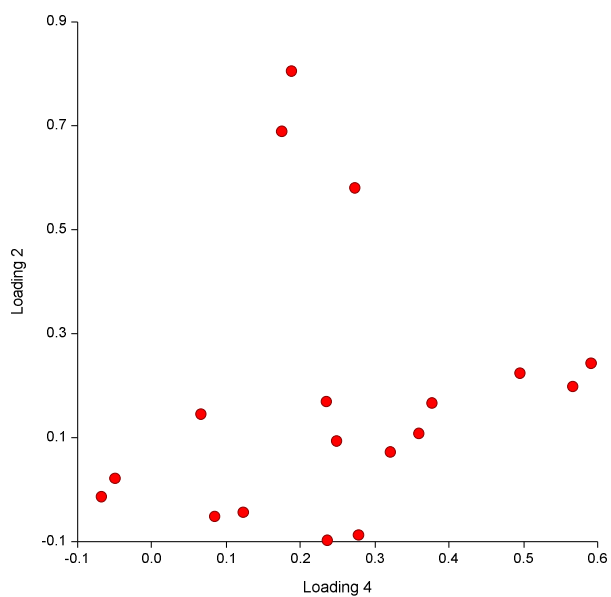
**Factor Analysis Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



**Factor Analysis Report**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



**Factor Analysis Report**  
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**APPENDIX C**

**ITEM STRUCTURE ANALYSIS OUTPUT**

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**Item Analysis Report – POLITICAL SKILL**

Dataset

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**Reliability Section**

|          |          | ----- Item Values ----- |               | ----- If This Item is Omitted ----- |               |               |                |
|----------|----------|-------------------------|---------------|-------------------------------------|---------------|---------------|----------------|
| R2       |          |                         |               |                                     |               |               |                |
| Variable | Mean     | Standard<br>Deviation   | Total<br>Mean | Total<br>Std.Dev.                   | Coef<br>Alpha | Corr<br>Total | Other<br>Items |
| Q1       | 4.720588 | 1.34471                 | 90.03432      | 10.15805                            | 0.8535        | 0.5218        | 0.5214         |
| Q2       | 5.627451 | 0.9249851               | 89.12745      | 10.49764                            | 0.8576        | 0.4219        | 0.3084         |
| Q3       | 5.578432 | 0.9357305               | 89.17647      | 10.53721                            | 0.8593        | 0.3723        | 0.3449         |
| Q4       | 5.661765 | 0.9355112               | 89.09314      | 10.45121                            | 0.8560        | 0.4678        | 0.4142         |
| Q5       | 5.303922 | 0.9703914               | 89.45098      | 10.40664                            | 0.8548        | 0.4956        | 0.3692         |
| Q6       | 5.014706 | 1.116283                | 89.7402       | 10.21426                            | 0.8500        | 0.5996        | 0.4676         |
| Q7       | 4.794117 | 1.218399                | 89.96078      | 10.30177                            | 0.8560        | 0.4636        | 0.4136         |
| Q8       | 6.181373 | 0.9371617               | 88.57353      | 10.64471                            | 0.8634        | 0.2537        | 0.5153         |
| Q9       | 5.240196 | 1.246138                | 89.51471      | 10.23925                            | 0.8542        | 0.5037        | 0.4562         |
| Q10      | 4.838235 | 1.367573                | 89.91666      | 10.02597                            | 0.8486        | 0.6148        | 0.5784         |
| Q11      | 4.602941 | 1.276615                | 90.15196      | 10.10055                            | 0.8492        | 0.6049        | 0.6321         |
| Q12      | 5.063725 | 1.078613                | 89.69118      | 10.23842                            | 0.8502        | 0.6004        | 0.4651         |
| Q13      | 6.151961 | 0.9528005               | 88.60294      | 10.66157                            | 0.8643        | 0.2300        | 0.4536         |
| Q14      | 5.97549  | 0.8563799               | 88.77941      | 10.62553                            | 0.8613        | 0.3085        | 0.3817         |
| Q15      | 4.921568 | 1.142                   | 89.83334      | 10.20102                            | 0.8501        | 0.5959        | 0.5790         |
| Q16      | 5.093137 | 1.099105                | 89.66177      | 10.28645                            | 0.8526        | 0.5409        | 0.4632         |
| Q17      | 4.578432 | 1.215145                | 90.17647      | 10.32278                            | 0.8568        | 0.4470        | 0.4651         |
| Q18      | 5.406863 | 1.138728                | 89.34804      | 10.4491                             | 0.8600        | 0.3685        | 0.2543         |
| Total    |          |                         | 94.75491      | 10.92016                            | 0.8625        |               |                |

Cronbach's Alpha 0.862525 Std. Cronbachs Alpha 0.859918

**Count Distribution Section**

| Variable | 1 | 2   | 3   | 4   | 5   | 6    |
|----------|---|-----|-----|-----|-----|------|
| Q1       | 1 | 17  | 23  | 30  | 68  | 56   |
| Q2       | 0 | 1   | 5   | 19  | 42  | 114  |
| Q3       | 0 | 0   | 6   | 23  | 45  | 107  |
| Q4       | 0 | 0   | 7   | 20  | 33  | 119  |
| Q5       | 0 | 1   | 7   | 33  | 65  | 84   |
| Q6       | 0 | 4   | 16  | 41  | 67  | 64   |
| Q7       | 0 | 9   | 26  | 34  | 74  | 51   |
| Q8       | 0 | 0   | 5   | 9   | 17  | 86   |
| Q9       | 1 | 8   | 11  | 23  | 64  | 72   |
| Q10      | 1 | 14  | 19  | 41  | 54  | 58   |
| Q11      | 1 | 20  | 17  | 36  | 82  | 43   |
| Q12      | 0 | 3   | 12  | 46  | 63  | 68   |
| Q13      | 0 | 0   | 4   | 11  | 22  | 80   |
| Q14      | 0 | 0   | 3   | 8   | 35  | 103  |
| Q15      | 0 | 6   | 11  | 57  | 64  | 51   |
| Q16      | 0 | 3   | 16  | 36  | 65  | 72   |
| Q17      | 0 | 13  | 25  | 51  | 68  | 40   |
| Q18      | 0 | 6   | 8   | 19  | 63  | 80   |
| Total    | 4 | 105 | 221 | 537 | 991 | 1348 |

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**Item Analysis Report**

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**Count Distribution Section**

| <b>Variable</b> | <b>7</b> |
|-----------------|----------|
| Q1              | 9        |
| Q2              | 23       |
| Q3              | 23       |
| Q4              | 25       |
| Q5              | 14       |
| Q6              | 12       |
| Q7              | 10       |
| Q8              | 87       |
| Q9              | 25       |
| Q10             | 17       |
| Q11             | 5        |
| Q12             | 12       |
| Q13             | 87       |
| Q14             | 55       |
| Q15             | 15       |
| Q16             | 12       |
| Q17             | 7        |
| Q18             | 28       |
| Total           | 466      |

**Percentage Distribution Section**

| <b>Variable</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|-----------------|----------|----------|----------|----------|----------|----------|
| Q1              | 0.49     | 8.33     | 11.27    | 14.71    | 33.33    | 27.45    |
| Q2              | 0.00     | 0.49     | 2.45     | 9.31     | 20.59    | 55.88    |
| Q3              | 0.00     | 0.00     | 2.94     | 11.27    | 22.06    | 52.45    |
| Q4              | 0.00     | 0.00     | 3.43     | 9.80     | 16.18    | 58.33    |
| Q5              | 0.00     | 0.49     | 3.43     | 16.18    | 31.86    | 41.18    |
| Q6              | 0.00     | 1.96     | 7.84     | 20.10    | 32.84    | 31.37    |
| Q7              | 0.00     | 4.41     | 12.75    | 16.67    | 36.27    | 25.00    |
| Q8              | 0.00     | 0.00     | 2.45     | 4.41     | 8.33     | 42.16    |
| Q9              | 0.49     | 3.92     | 5.39     | 11.27    | 31.37    | 35.29    |
| Q10             | 0.49     | 6.86     | 9.31     | 20.10    | 26.47    | 28.43    |
| Q11             | 0.49     | 9.80     | 8.33     | 17.65    | 40.20    | 21.08    |
| Q12             | 0.00     | 1.47     | 5.88     | 22.55    | 30.88    | 33.33    |
| Q13             | 0.00     | 0.00     | 1.96     | 5.39     | 10.78    | 39.22    |
| Q14             | 0.00     | 0.00     | 1.47     | 3.92     | 17.16    | 50.49    |
| Q15             | 0.00     | 2.94     | 5.39     | 27.94    | 31.37    | 25.00    |
| Q16             | 0.00     | 1.47     | 7.84     | 17.65    | 31.86    | 35.29    |
| Q17             | 0.00     | 6.37     | 12.25    | 25.00    | 33.33    | 19.61    |
| Q18             | 0.00     | 2.94     | 3.92     | 9.31     | 30.88    | 39.22    |
| Total           | 0.11     | 2.86     | 6.02     | 14.62    | 26.99    | 36.71    |

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**Item Analysis Report**

Dataset

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**Percentage Distribution Section**

| <b>Variable</b> | <b>7</b> |
|-----------------|----------|
| Q1              | 4.41     |
| Q2              | 11.27    |
| Q3              | 11.27    |
| Q4              | 12.25    |
| Q5              | 6.86     |
| Q6              | 5.88     |
| Q7              | 4.90     |
| Q8              | 42.65    |
| Q9              | 12.25    |
| Q10             | 8.33     |
| Q11             | 2.45     |
| Q12             | 5.88     |
| Q13             | 42.65    |
| Q14             | 26.96    |
| Q15             | 7.35     |
| Q16             | 5.88     |
| Q17             | 3.43     |
| Q18             | 13.73    |
| Total           | 12.69    |

**Item Detail Section for Q1**

| <b>Value</b> | <b>Count</b> | <b>Individual Percent</b> | <b>Cumulative Percent</b> | <b>Percent Bar Chart</b> |
|--------------|--------------|---------------------------|---------------------------|--------------------------|
| 1            | 1            | 0.49                      | 0.49                      |                          |
| 2            | 17           | 8.33                      | 8.82                      |                          |
| 3            | 23           | 11.27                     | 20.10                     |                          |
| 4            | 30           | 14.71                     | 34.80                     |                          |
| 5            | 68           | 33.33                     | 68.14                     |                          |
| 6            | 56           | 27.45                     | 95.59                     |                          |
| 7            | 9            | 4.41                      | 100.00                    |                          |
| Total        | 204          |                           |                           |                          |

**Item Detail Section for Q2**

| <b>Value</b> | <b>Count</b> | <b>Individual Percent</b> | <b>Cumulative Percent</b> | <b>Percent Bar Chart</b> |
|--------------|--------------|---------------------------|---------------------------|--------------------------|
| 1            | 0            | 0.00                      | 0.00                      |                          |
| 2            | 1            | 0.49                      | 0.49                      |                          |
| 3            | 5            | 2.45                      | 2.94                      |                          |
| 4            | 19           | 9.31                      | 12.25                     |                          |
| 5            | 42           | 20.59                     | 32.84                     |                          |
| 6            | 114          | 55.88                     | 88.73                     |                          |
| 7            | 23           | 11.27                     | 100.00                    |                          |
| Total        | 204          |                           |                           |                          |

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**Item Analysis Report**

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**Item Detail Section for Q3**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 0     | 0.00               | 0.00               |                   |
| 3     | 6     | 2.94               | 2.94               |                   |
| 4     | 23    | 11.27              | 14.22              |                   |
| 5     | 45    | 22.06              | 36.27              |                   |
| 6     | 107   | 52.45              | 88.73              |                   |
| 7     | 23    | 11.27              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q4**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 0     | 0.00               | 0.00               |                   |
| 3     | 7     | 3.43               | 3.43               |                   |
| 4     | 20    | 9.80               | 13.24              |                   |
| 5     | 33    | 16.18              | 29.41              |                   |
| 6     | 119   | 58.33              | 87.75              |                   |
| 7     | 25    | 12.25              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q5**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 1     | 0.49               | 0.49               |                   |
| 3     | 7     | 3.43               | 3.92               |                   |
| 4     | 33    | 16.18              | 20.10              |                   |
| 5     | 65    | 31.86              | 51.96              |                   |
| 6     | 84    | 41.18              | 93.14              |                   |
| 7     | 14    | 6.86               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q6**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 4     | 1.96               | 1.96               |                   |
| 3     | 16    | 7.84               | 9.80               |                   |
| 4     | 41    | 20.10              | 29.90              |                   |
| 5     | 67    | 32.84              | 62.75              |                   |
| 6     | 64    | 31.37              | 94.12              |                   |
| 7     | 12    | 5.88               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

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**Item Analysis Report**

Dataset

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**Item Detail Section for Q7**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 9     | 4.41               | 4.41               |                   |
| 3     | 26    | 12.75              | 17.16              |                   |
| 4     | 34    | 16.67              | 33.82              |                   |
| 5     | 74    | 36.27              | 70.10              |                   |
| 6     | 51    | 25.00              | 95.10              |                   |
| 7     | 10    | 4.90               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q8**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 0     | 0.00               | 0.00               |                   |
| 3     | 5     | 2.45               | 2.45               |                   |
| 4     | 9     | 4.41               | 6.86               |                   |
| 5     | 17    | 8.33               | 15.20              |                   |
| 6     | 86    | 42.16              | 57.35              |                   |
| 7     | 87    | 42.65              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q9**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 1     | 0.49               | 0.49               |                   |
| 2     | 8     | 3.92               | 4.41               |                   |
| 3     | 11    | 5.39               | 9.80               |                   |
| 4     | 23    | 11.27              | 21.08              |                   |
| 5     | 64    | 31.37              | 52.45              |                   |
| 6     | 72    | 35.29              | 87.75              |                   |
| 7     | 25    | 12.25              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q10**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 1     | 0.49               | 0.49               |                   |
| 2     | 14    | 6.86               | 7.35               |                   |
| 3     | 19    | 9.31               | 16.67              |                   |
| 4     | 41    | 20.10              | 36.76              |                   |
| 5     | 54    | 26.47              | 63.24              |                   |
| 6     | 58    | 28.43              | 91.67              |                   |
| 7     | 17    | 8.33               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

4/14/2014 7:52:21 AM 6

**Item Analysis Report**

Dataset

C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Item Detail Section for Q11**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 1     | 0.49               | 0.49               |                   |
| 2     | 20    | 9.80               | 10.29              |                   |
| 3     | 17    | 8.33               | 18.63              |                   |
| 4     | 36    | 17.65              | 36.27              |                   |
| 5     | 82    | 40.20              | 76.47              |                   |
| 6     | 43    | 21.08              | 97.55              |                   |
| 7     | 5     | 2.45               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q12**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 3     | 1.47               | 1.47               |                   |
| 3     | 12    | 5.88               | 7.35               |                   |
| 4     | 46    | 22.55              | 29.90              |                   |
| 5     | 63    | 30.88              | 60.78              |                   |
| 6     | 68    | 33.33              | 94.12              |                   |
| 7     | 12    | 5.88               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q13**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 0     | 0.00               | 0.00               |                   |
| 3     | 4     | 1.96               | 1.96               |                   |
| 4     | 11    | 5.39               | 7.35               |                   |
| 5     | 22    | 10.78              | 18.14              |                   |
| 6     | 80    | 39.22              | 57.35              |                   |
| 7     | 87    | 42.65              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q14**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 0     | 0.00               | 0.00               |                   |
| 3     | 3     | 1.47               | 1.47               |                   |
| 4     | 8     | 3.92               | 5.39               |                   |
| 5     | 35    | 17.16              | 22.55              |                   |
| 6     | 103   | 50.49              | 73.04              |                   |
| 7     | 55    | 26.96              | 100.00             |                   |
| Total | 204   |                    |                    |                   |

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**Item Analysis Report**

Dataset

C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Item Detail Section for Q15**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 6     | 2.94               | 2.94               |                   |
| 3     | 11    | 5.39               | 8.33               |                   |
| 4     | 57    | 27.94              | 36.27              |                   |
| 5     | 64    | 31.37              | 67.65              |                   |
| 6     | 51    | 25.00              | 92.65              |                   |
| 7     | 15    | 7.35               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q16**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 3     | 1.47               | 1.47               |                   |
| 3     | 16    | 7.84               | 9.31               |                   |
| 4     | 36    | 17.65              | 26.96              |                   |
| 5     | 65    | 31.86              | 58.82              |                   |
| 6     | 72    | 35.29              | 94.12              |                   |
| 7     | 12    | 5.88               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q17**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 13    | 6.37               | 6.37               |                   |
| 3     | 25    | 12.25              | 18.63              |                   |
| 4     | 51    | 25.00              | 43.63              |                   |
| 5     | 68    | 33.33              | 76.96              |                   |
| 6     | 40    | 19.61              | 96.57              |                   |
| 7     | 7     | 3.43               | 100.00             |                   |
| Total | 204   |                    |                    |                   |

**Item Detail Section for Q18**

| Value | Count | Individual Percent | Cumulative Percent | Percent Bar Chart |
|-------|-------|--------------------|--------------------|-------------------|
| 1     | 0     | 0.00               | 0.00               |                   |
| 2     | 6     | 2.94               | 2.94               |                   |
| 3     | 8     | 3.92               | 6.86               |                   |
| 4     | 19    | 9.31               | 16.18              |                   |
| 5     | 63    | 30.88              | 47.06              |                   |
| 6     | 80    | 39.22              | 86.27              |                   |
| 7     | 28    | 13.73              | 100.00             |                   |
| Total | 204   |                    |                    |                   |



4/17/2014 2:03:20 PM 1

**Item Analysis Report – Apparent Sincerity**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Reliability Section**

| Variable | Item Values |                    | If This Item is Omitted |                |            |            | R2          |
|----------|-------------|--------------------|-------------------------|----------------|------------|------------|-------------|
|          | Mean        | Standard Deviation | Total Mean              | Total Std.Dev. | Coef Alpha | Corr Total | Other Items |
| Q8       | 6.181373    | 0.9371617          | 12.12745                | 1.548376       | 0.6309     | 0.6426     | 0.4159      |
| Q13      | 6.151961    | 0.9528005          | 12.15686                | 1.558356       | 0.6727     | 0.6076     | 0.3810      |
| Q14      | 5.97549     | 0.8563799          | 12.33333                | 1.683495       | 0.7396     | 0.5456     | 0.3004      |
| Total    |             |                    | 18.30882                | 2.267292       | 0.7648     |            |             |

Cronbach's Alpha 0.764829 Std. Cronbachs Alpha 0.764503

4/17/2014 2:00:47 PM 1

**Item Analysis Report – Interpersonal Influence**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Reliability Section**

| Variable | Item Values |                    | If This Item is Omitted |                |            |            | R2          |
|----------|-------------|--------------------|-------------------------|----------------|------------|------------|-------------|
|          | Mean        | Standard Deviation | Total Mean              | Total Std.Dev. | Coef Alpha | Corr Total | Other Items |
| Q2       | 5.627451    | 0.9249851          | 16.30392                | 2.160046       | 0.5631     | 0.4859     | 0.2450      |
| Q3       | 5.578432    | 0.9357305          | 16.35294                | 2.15483        | 0.5650     | 0.4822     | 0.2547      |
| Q4       | 5.661765    | 0.9355112          | 16.26961                | 2.152066       | 0.5625     | 0.4859     | 0.2740      |
| Q12      | 5.063725    | 1.078613           | 16.86765                | 2.180779       | 0.6779     | 0.3282     | 0.1119      |
| Total    |             |                    | 21.93137                | 2.731894       | 0.6599     |            |             |

Cronbach's Alpha 0.659850 Std. Cronbachs Alpha 0.667493

4/17/2014 2:01:34 PM 1

**Item Analysis Report – Networking Ability**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Reliability Section**

| Variable | Item Values |                    | If This Item is Omitted |                |            |            | R2          |
|----------|-------------|--------------------|-------------------------|----------------|------------|------------|-------------|
|          | Mean        | Standard Deviation | Total Mean              | Total Std.Dev. | Coef Alpha | Corr Total | Other Items |
| Q1       | 4.720588    | 1.34471            | 24.61765                | 4.81284        | 0.8397     | 0.6083     | 0.4523      |
| Q6       | 5.014706    | 1.116283           | 24.32353                | 5.010652       | 0.8435     | 0.5804     | 0.3626      |
| Q9       | 5.240196    | 1.246138           | 24.09804                | 4.911051       | 0.8427     | 0.5862     | 0.3737      |
| Q10      | 4.838235    | 1.367573           | 24.5                    | 4.662501       | 0.8164     | 0.7243     | 0.5421      |
| Q11      | 4.602941    | 1.276615           | 24.73529                | 4.742485       | 0.8175     | 0.7205     | 0.5714      |
| Q15      | 4.921568    | 1.142              | 24.41667                | 4.916837       | 0.8308     | 0.6559     | 0.4711      |
| Total    |             |                    | 29.33824                | 5.73111        | 0.8562     |            |             |

Cronbach's Alpha 0.856160 Std. Cronbachs Alpha 0.856469

4/17/2014 2:02:36 PM 1

**Item Analysis Report – Social Astuteness**

Dataset

C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Reliability Section**

| Variable | ----- Item Values ----- |                       | ----- If This Item is Omitted ----- |                   |               |               | R2             |
|----------|-------------------------|-----------------------|-------------------------------------|-------------------|---------------|---------------|----------------|
|          | Mean                    | Standard<br>Deviation | Total<br>Mean                       | Total<br>Std.Dev. | Coef<br>Alpha | Corr<br>Total | Other<br>Items |
| Q5       | 5.303922                | 0.9703914             | 19.87255                            | 3.340073          | 0.6801        | 0.4421        | 0.2154         |
| Q7       | 4.794117                | 1.218399              | 20.38235                            | 3.094709          | 0.6480        | 0.5174        | 0.2794         |
| Q16      | 5.093137                | 1.099105              | 20.08333                            | 3.122762          | 0.6224        | 0.5833        | 0.3724         |
| Q17      | 4.578432                | 1.215145              | 20.59804                            | 3.127062          | 0.6610        | 0.4880        | 0.3435         |
| Q18      | 5.406863                | 1.138728              | 19.76961                            | 3.321946          | 0.7158        | 0.3479        | 0.1690         |
| Total    |                         |                       | 25.17647                            | 3.868304          | 0.7148        |               |                |

Cronbach's Alpha 0.714752      Std. Cronbachs Alpha 0.716193

**APPENDIX D**

**AUTHORIZATION TO USE POLITICAL SKILL INVENTORY**

**Roger Karnes**

---

**From:** Ferris, Gerald <gferris@cob.fsu.edu>  
**Sent:** Sunday, April 01, 2012 5:07 PM  
**To:** Roger E Karnes  
**Cc:** rkarnes@iowatelecom.net  
**Subject:** RE: Political Skills Inventory - Usage Request

Hey Roger,

Yes, of course, you have my permission to use the Political Skill Inventory, although because the scale is not copyrighted, and is 'public domain,' you are free to use it even without my permission. I wish you the very best with your research, and let me know how it turns out.

Best regards,

GRF

---

From: Roger E Karnes [roger.karnes@drake.edu]  
 Sent: Sunday, April 01, 2012 3:31 PM  
 To: Ferris, Gerald  
 Cc: rkarnes@iowatelecom.net; Roger E Karnes  
 Subject: Political Skills Inventory - Usage Request

Dr. Ferris,

As a doctoral candidate at Drake University and an admirer of your work on organizational political skill I felt compelled to contact you. Over the last 3 years I have had the pleasure of studying much of your work, and now that I have reached the dissertation stage of my academic career I would like to ask your permission to use the Political Skills Inventory (PSI) for my research.

The purpose of this research will be to determine if the political skill dimensions are contingent upon dispositional characteristics (e.g. age, gender, race, etc.). This was suggested as further research by Todd, Harris, Harris and Wheeler in their 2009 work. I believe this will add to the body of knowledge on organizational political skill, and I would be willing to meet with you to discuss if your schedule allows.

I sincerely appreciate your consideration of my request and look forward to your reply.

Respectfully,

Roger E. Karnes

----

Roger E. Karnes, Ed.D. (ABD), SPHR

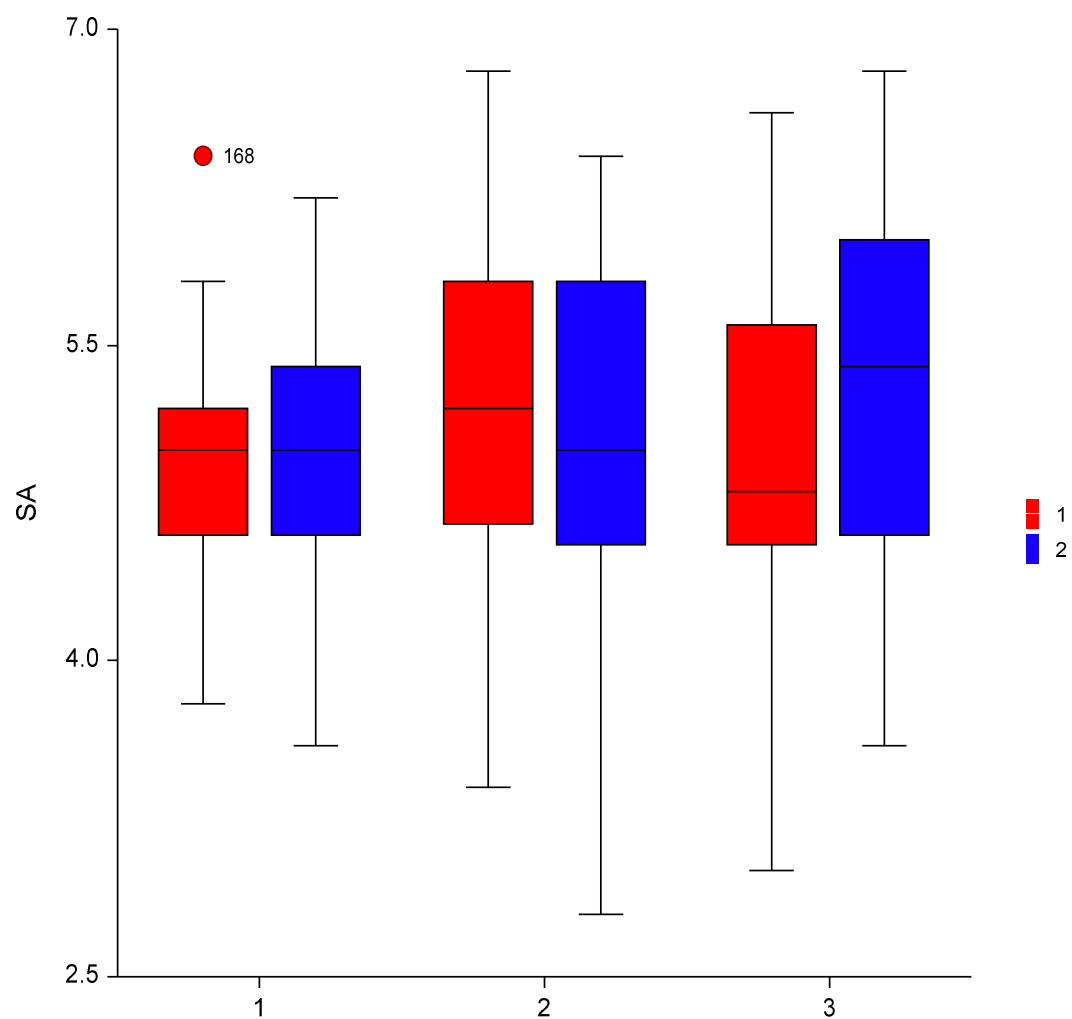
126 Terrace Drive

**APPENDIX E**

**BOX PLOTS FOR OUTLIER ANALYSIS**

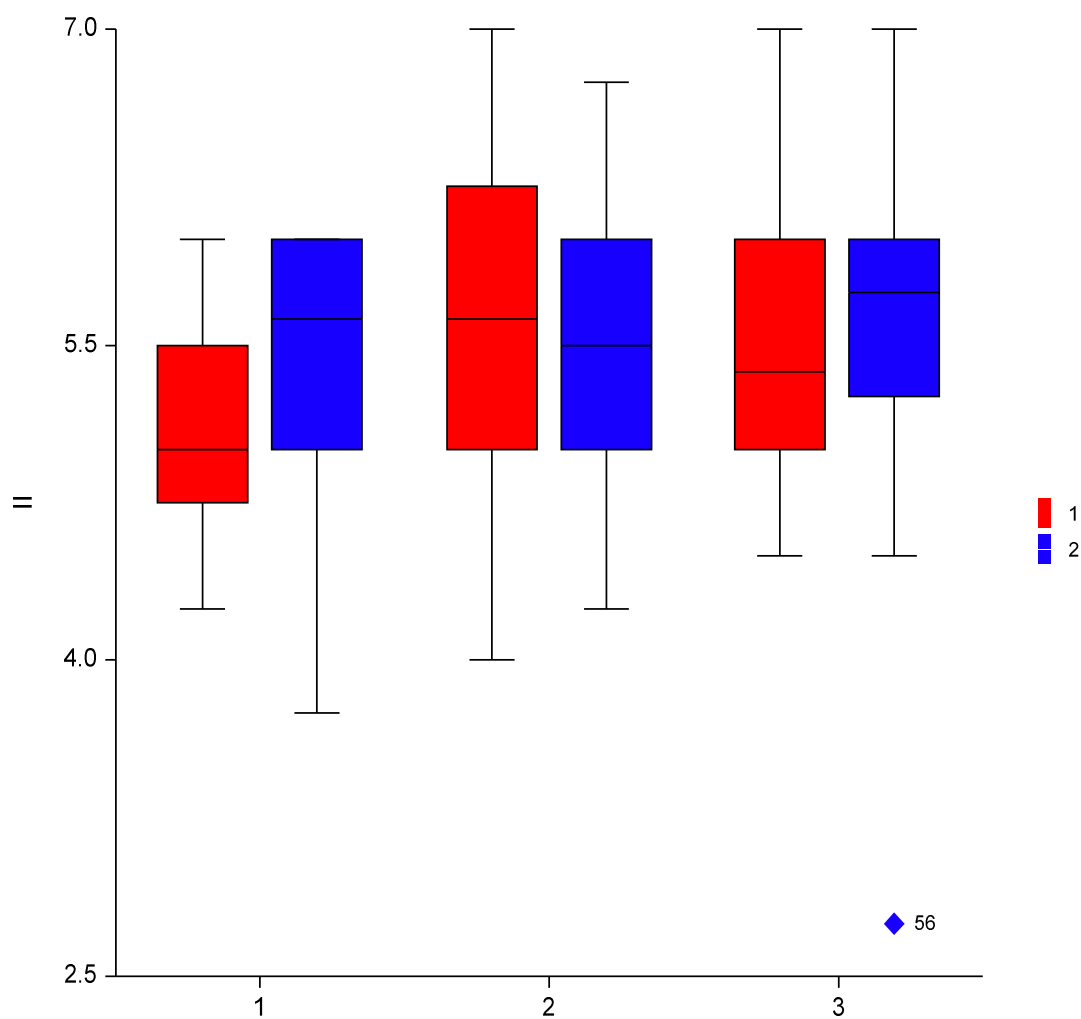
4/14/2014 7:30:28 AM 1

**Box Plot – Social Astuteness**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS

**Box Plots**

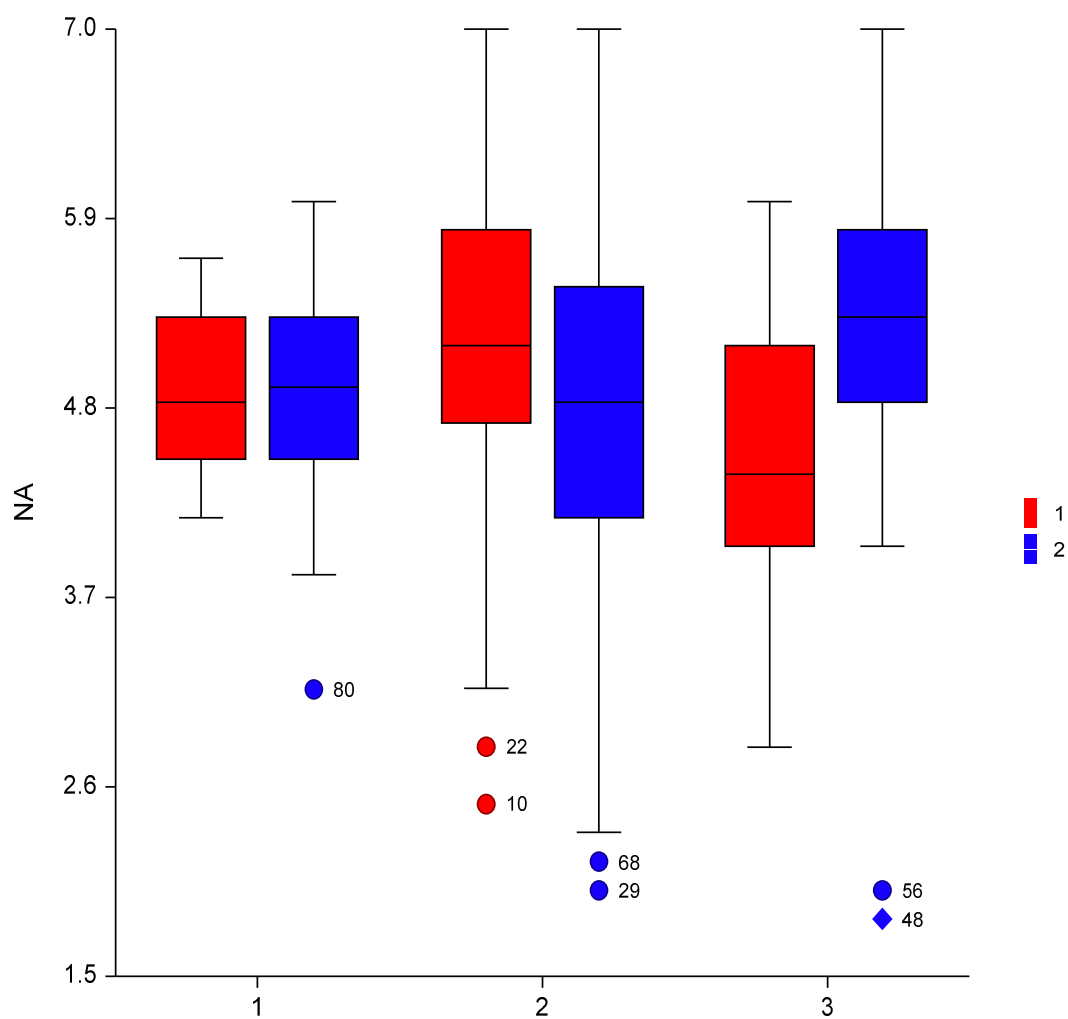
4/14/2014 7:30:28 AM 2

**Box Plot – Interpersonal Influence**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



4/14/2014 7:30:28 AM 3

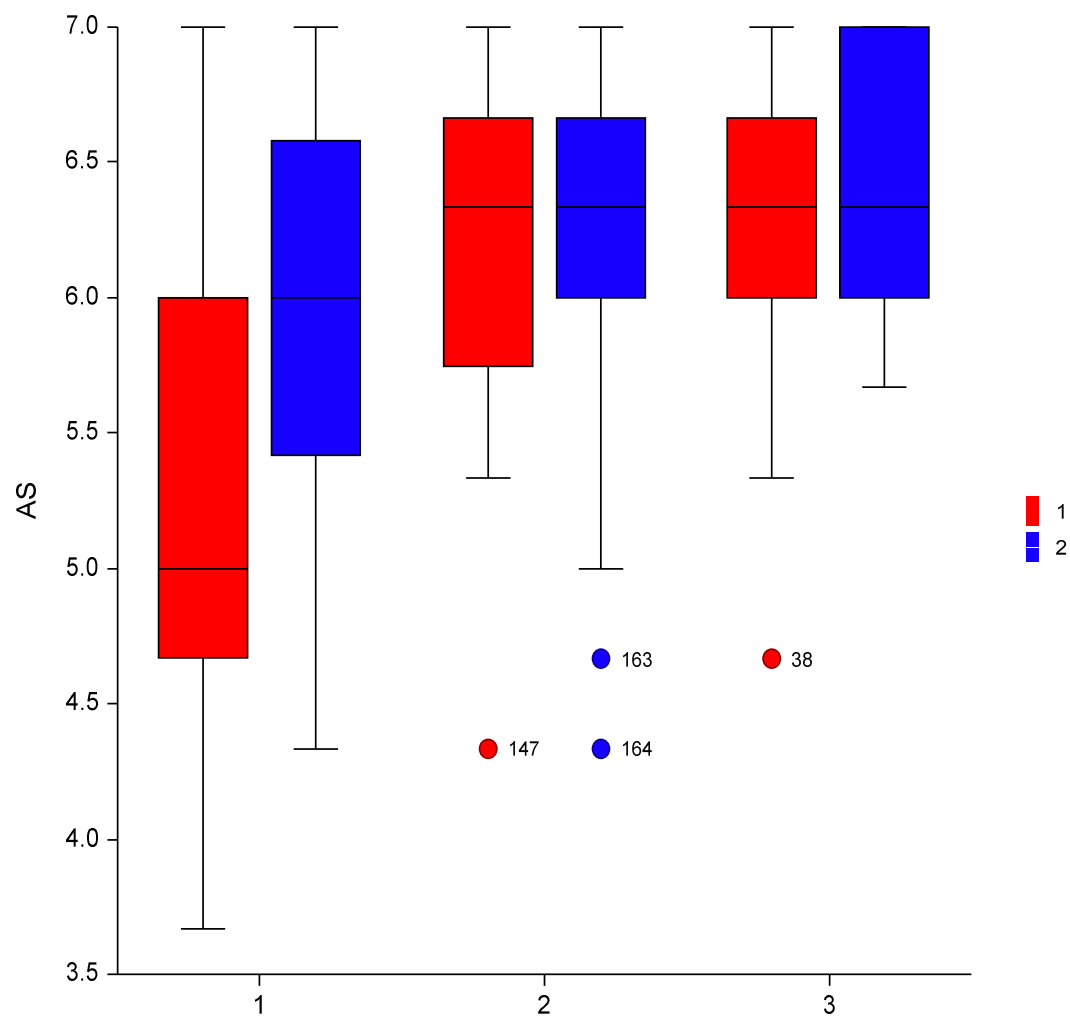
**Box Plot – Networking Ability**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS





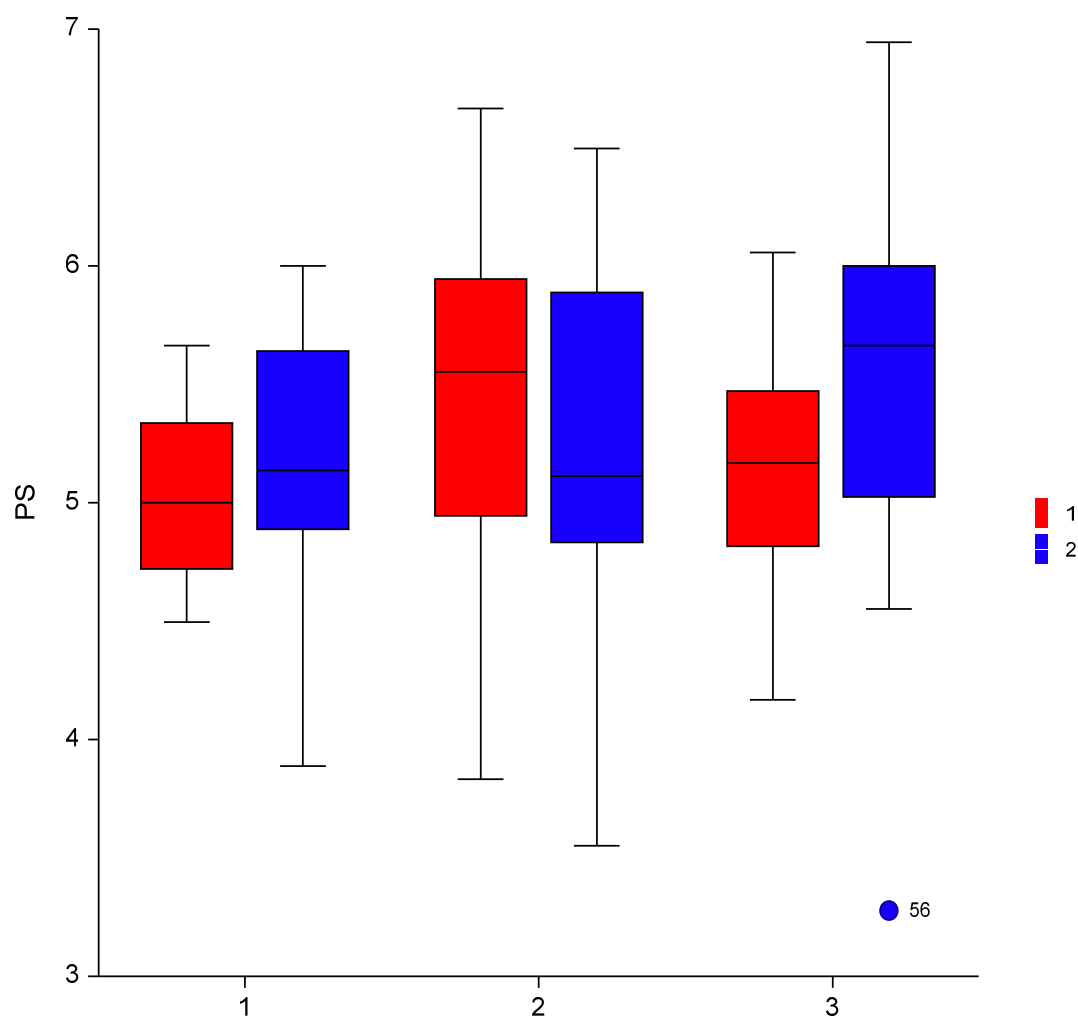
4/14/2014 7:30:28 AM 4

**Box Plot – Apparent Sincerity**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



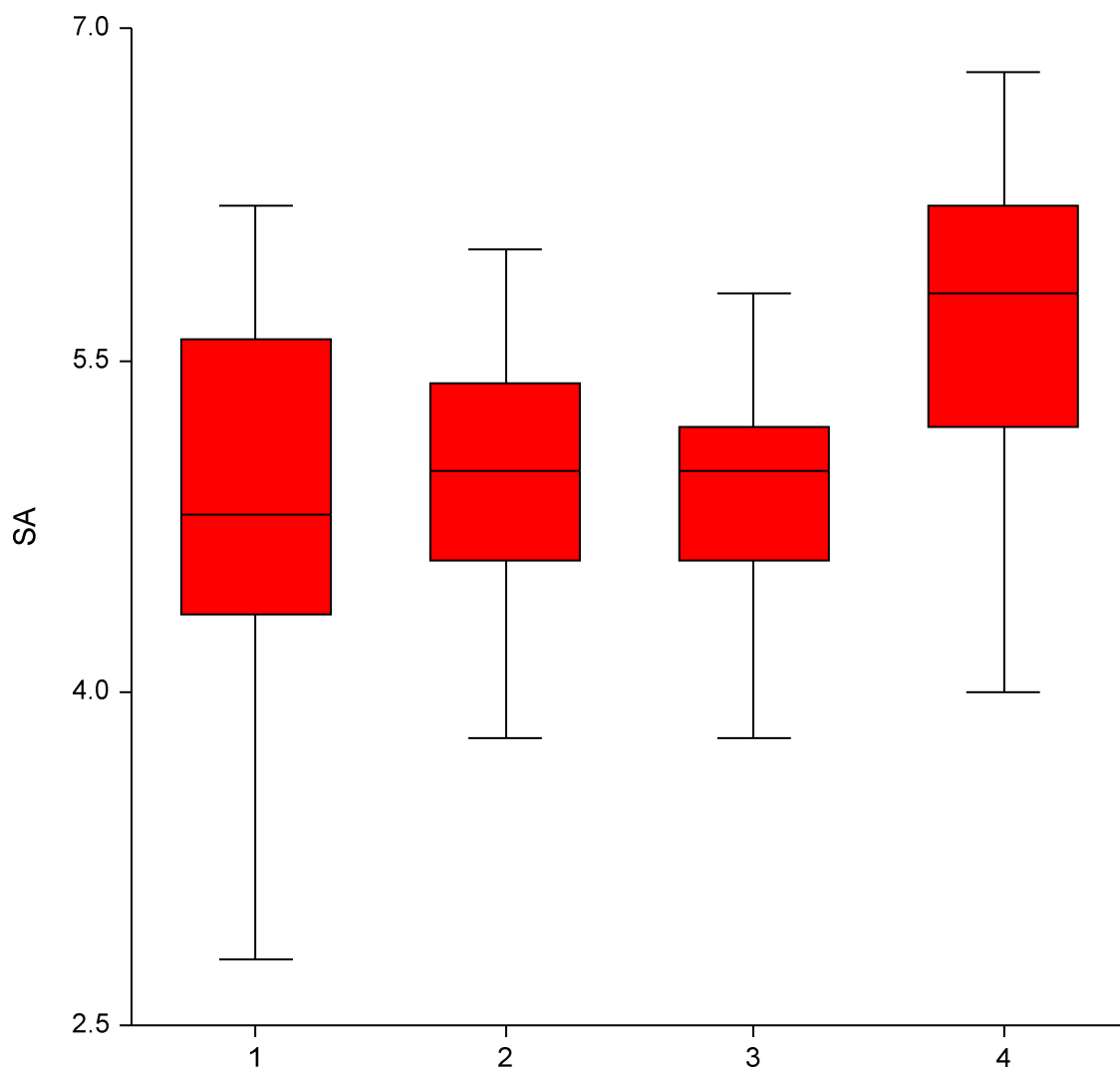
4/14/2014 7:30:28 AM 5

**Box Plot – Political Skill**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



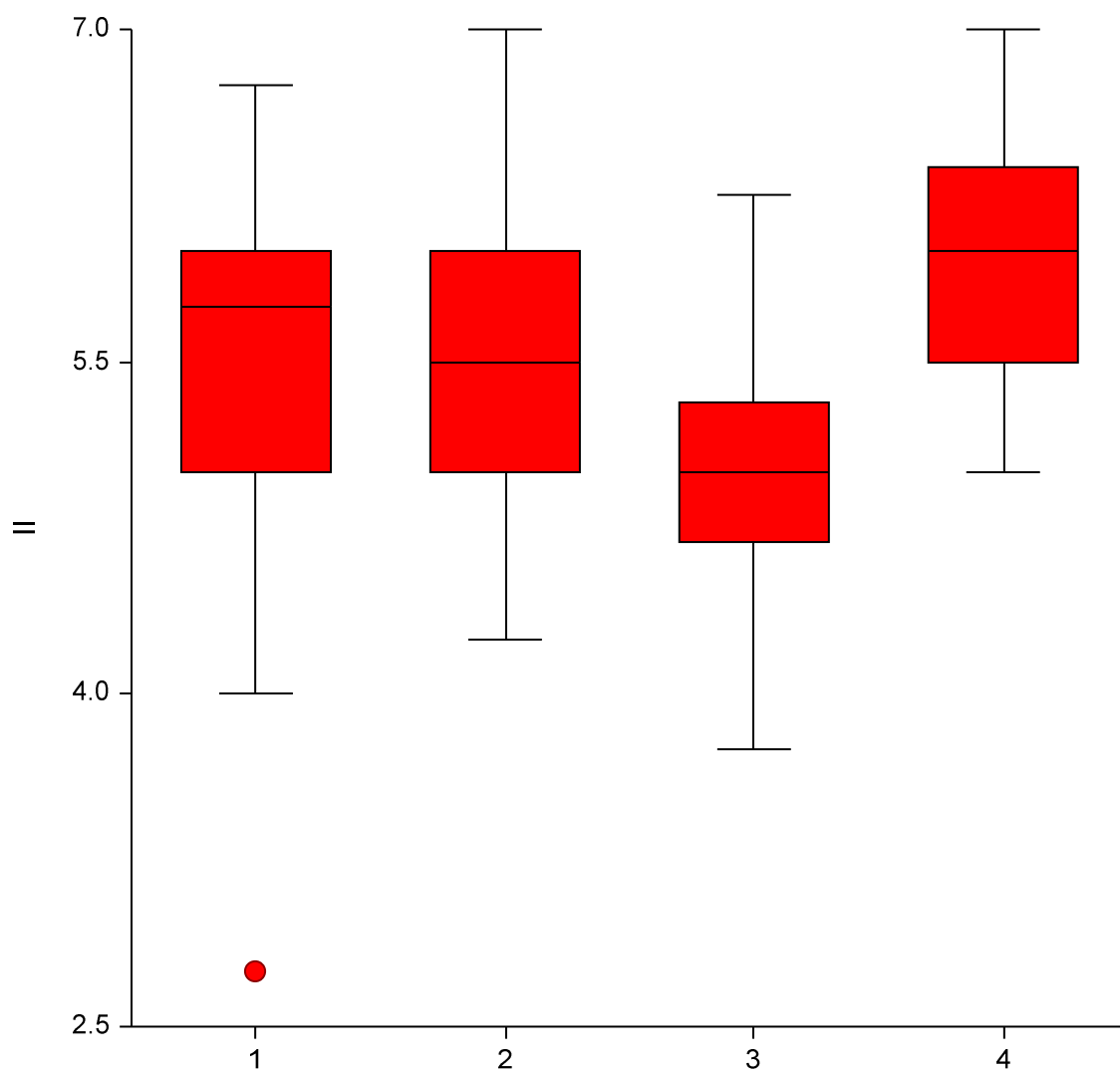
4/14/2014 7:27:06 AM 1

**Box Plot – Social Astuteness (Cluster Variable)**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



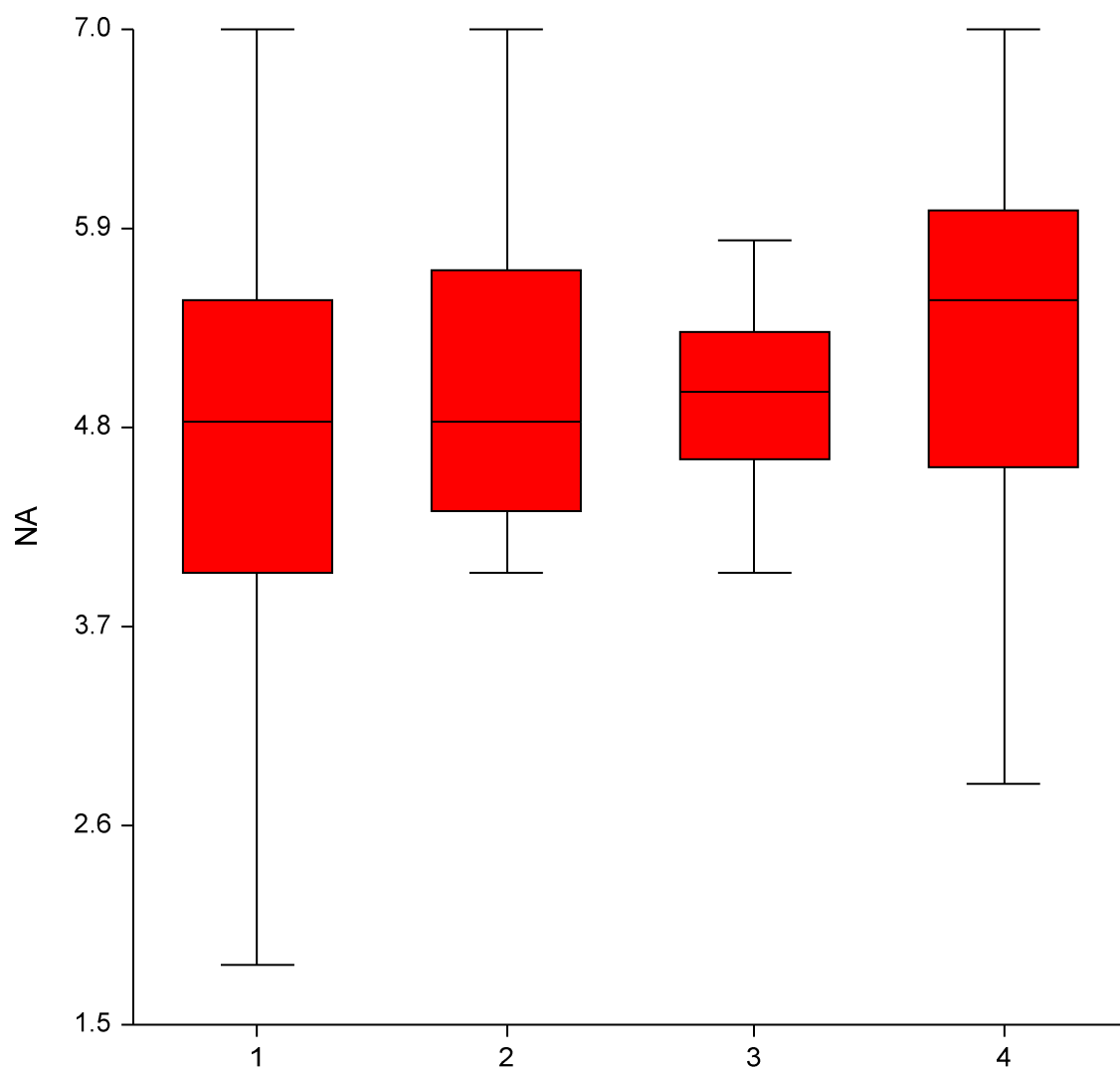
4/14/2014 7:27:06 AM 2

Dataset **Box Plot – Interpersonal Influence (Cluster Variable)**  
C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



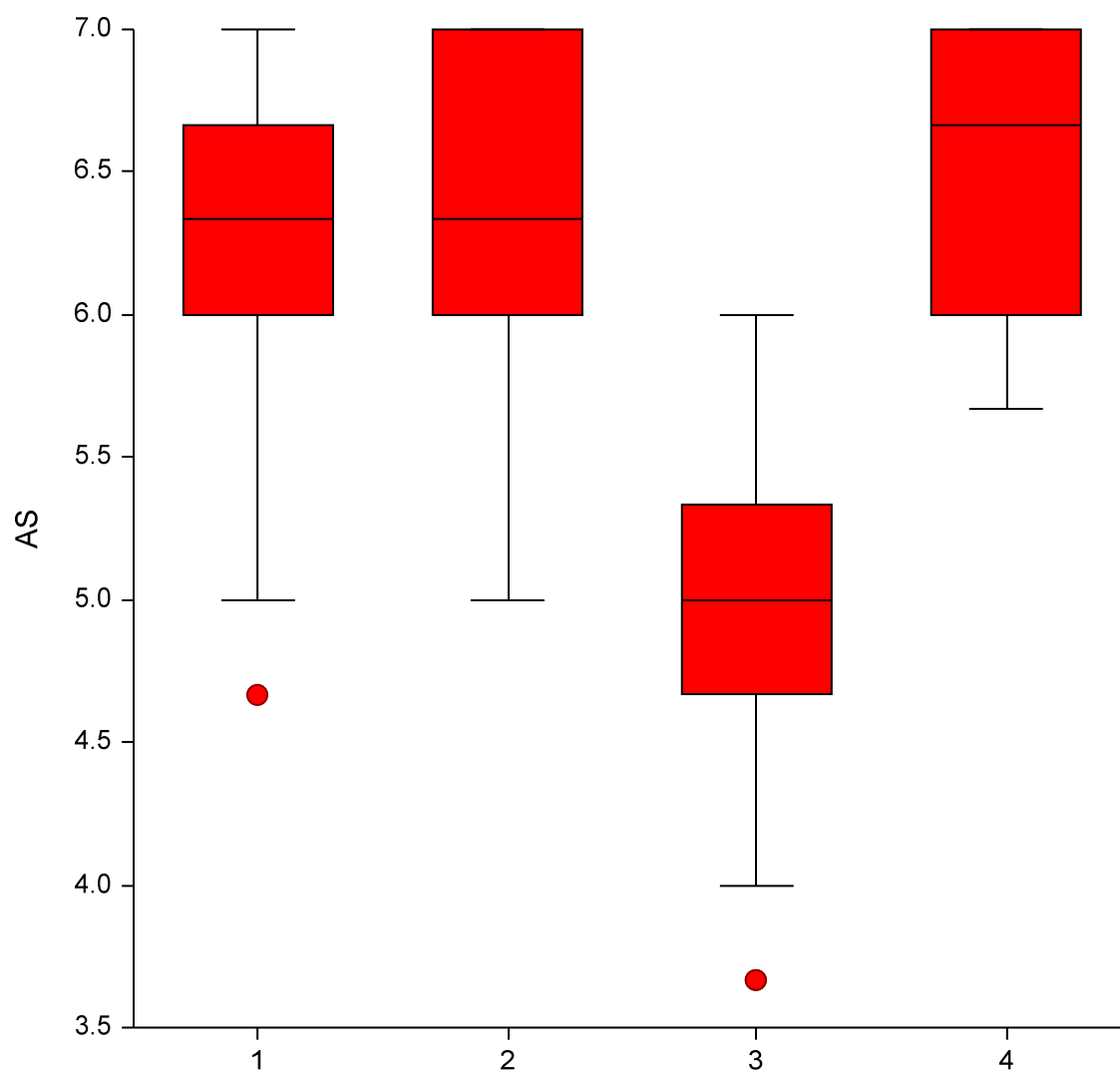
4/14/2014 7:27:06 AM 3

**Box Plot – Networking Ability (Cluster Variable)**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



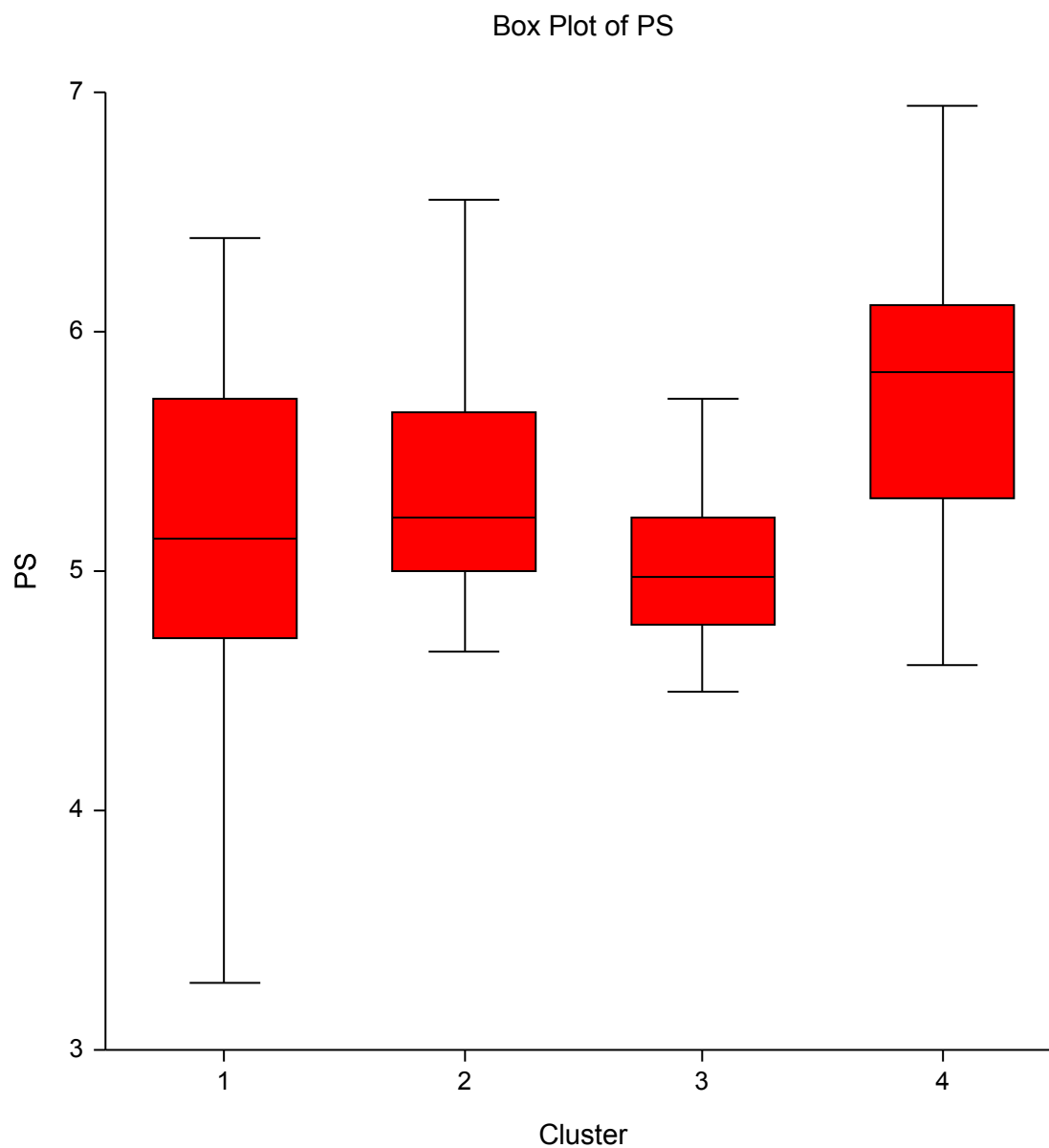
4/14/2014 7:27:06 AM 4

**Box Plot – Apparent Sincerity (Cluster Variable)**  
Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



4/14/2014 7:27:06 AM 5

Dataset **Box Plot – Political Skill (Cluster Variable)**  
C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS



**APPENDIX F****NETWORK ABILITY DIMENSION ANALYSIS OUTPUT**



4/17/2014 2:28:51 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 195 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

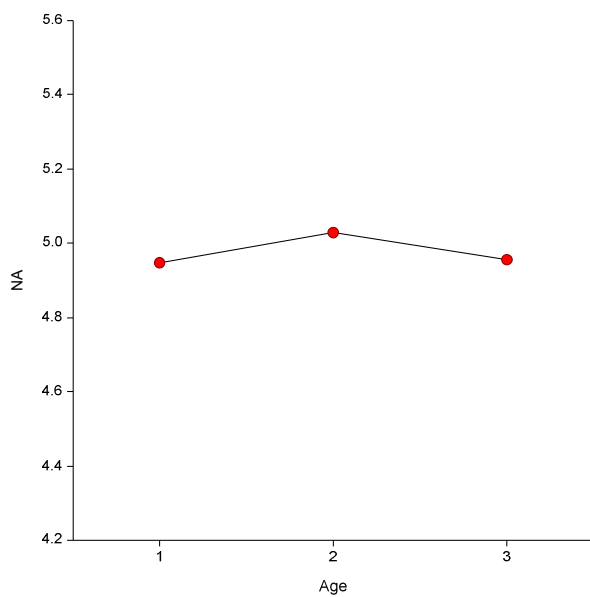
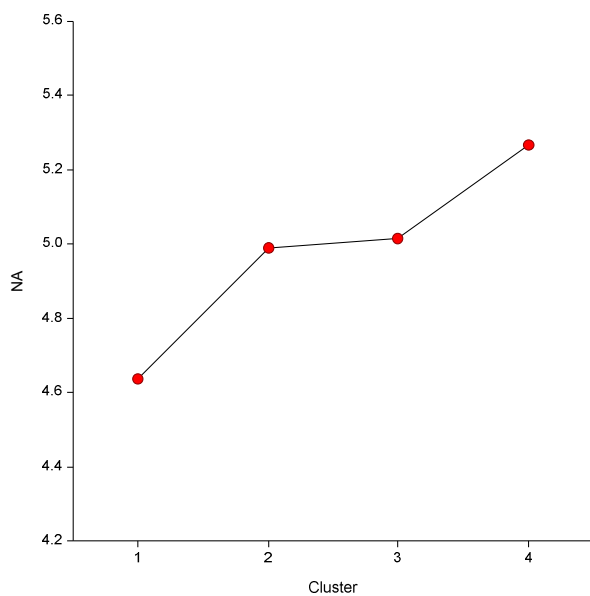
| Source<br>Term   | DF  | Sum of<br>Squares | Mean<br>Square | F-Ratio | Prob<br>Level | Power<br>(Alpha=0.05) |
|------------------|-----|-------------------|----------------|---------|---------------|-----------------------|
| A: Cluster       | 3   | 11.27507          | 3.758357       | 4.38    | 0.005180*     | 0.867746              |
| B: Age           | 2   | 0.2706234         | 0.1353117      | 0.16    | 0.854072      | 0.074142              |
| C: Gender        | 1   | 0.002839121       | 0.002839121    | 0.00    | 0.954163      | 0.050376              |
| BC               | 2   | 6.797612          | 3.398806       | 3.97    | 0.020510*     | 0.706444              |
| S                | 195 | 167.1387          | 0.8571213      |         |               |                       |
| Total (Adjusted) | 203 | 185.2128          |                |         |               |                       |
| Total            | 204 |                   |                |         |               |                       |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

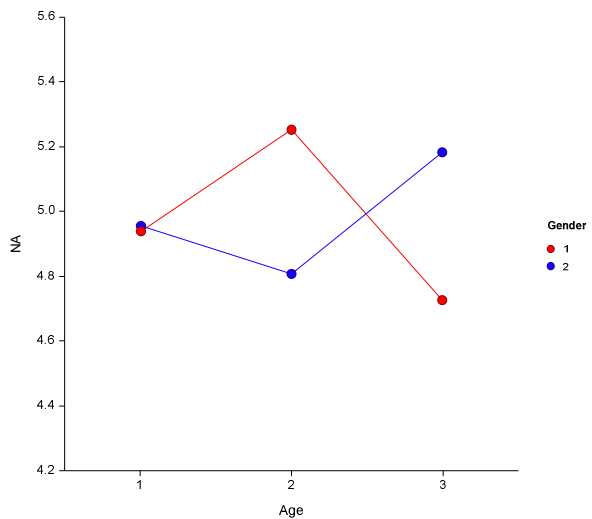
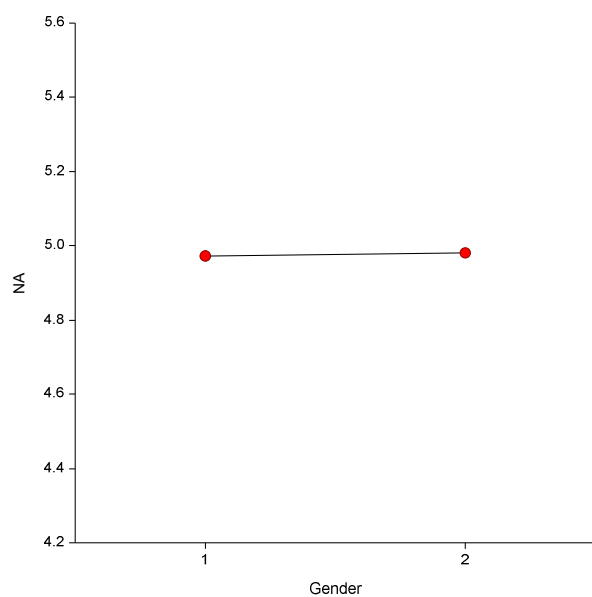
| Term           | Count | Mean     | Standard<br>Error |
|----------------|-------|----------|-------------------|
| All            | 204   | 4.977245 |                   |
| A: Cluster     |       |          |                   |
| 1              | 82    | 4.636923 | 0.1022384         |
| 2              | 43    | 4.990269 | 0.1411845         |
| 3              | 42    | 5.013902 | 0.1428553         |
| 4              | 37    | 5.267885 | 0.152202          |
| B: Age         |       |          |                   |
| 1              | 63    | 4.947168 | 0.1166409         |
| 2              | 86    | 5.029774 | 0.0998325         |
| 3              | 55    | 4.954793 | 0.124836          |
| C: Gender      |       |          |                   |
| 1              | 93    | 4.973338 | 0.09600187        |
| 2              | 111   | 4.981152 | 0.08787385        |
| BC: Age,Gender |       |          |                   |
| 1,1            | 27    | 4.939212 | 0.1781719         |
| 1,2            | 36    | 4.955124 | 0.1543014         |
| 2,1            | 36    | 5.25322  | 0.1543014         |
| 2,2            | 50    | 4.806327 | 0.1309291         |
| 3,1            | 30    | 4.727582 | 0.1690287         |
| 3,2            | 25    | 5.182005 | 0.1851617         |

4/17/2014 2:28:51 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
NA**Plots Section**

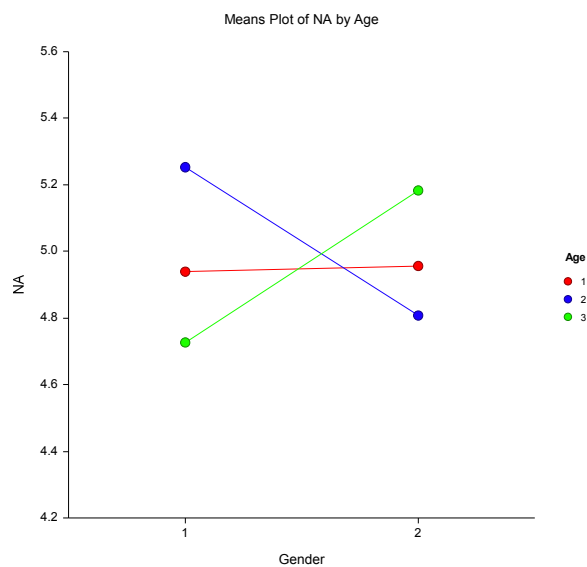
4/17/2014 2:28:51 PM 3

**Analysis of Variance Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Response NA



4/17/2014 2:28:51 PM 4

**Analysis of Variance Report**  
 Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response NA



### Tukey-Kramer Multiple-Comparison Test

Response: NA  
 Term A: Cluster

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.8571213 Critical Value=3.6714

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 82    | 4.636923 | 4                     |
| 2     | 43    | 4.990269 |                       |
| 3     | 42    | 5.013902 |                       |
| 4     | 37    | 5.267885 | 1                     |

#### Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Age

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.8571213 Critical Value=3.3475

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 4.947168 |                       |
| 2     | 86    | 5.029774 |                       |
| 3     | 55    | 4.954793 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term C: Gender

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.8571213 Critical Value=2.7973

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 4.973338 |                       |
| 2     | 111   | 4.981152 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

4/22/2014 10:08:37 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 1  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 58 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 0.3468912                          | 0.1156304      | 0.34    | 0.798164      | 0.047403 |
| B: Gender        | 1  | 0.01186588                         | 0.01186588     | 0.03    | 0.852984      | 0.018834 |
| S                | 58 | 19.86299                           | 0.3424653      |         |               |          |
| Total (Adjusted) | 62 | 20.21517                           |                |         |               |          |
| Total            | 63 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

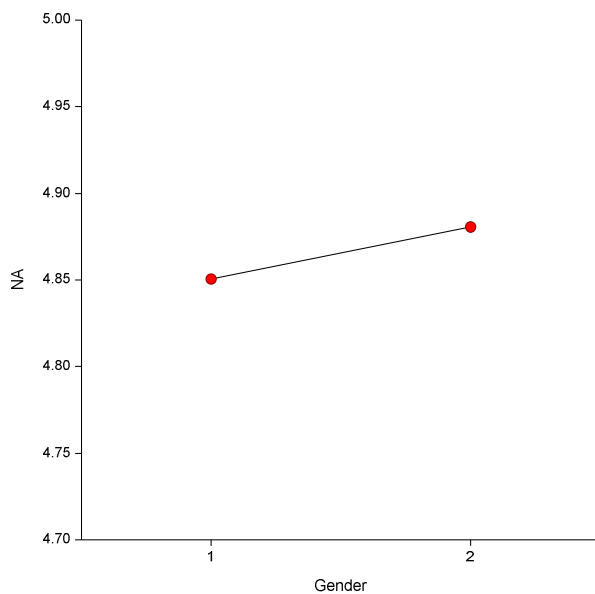
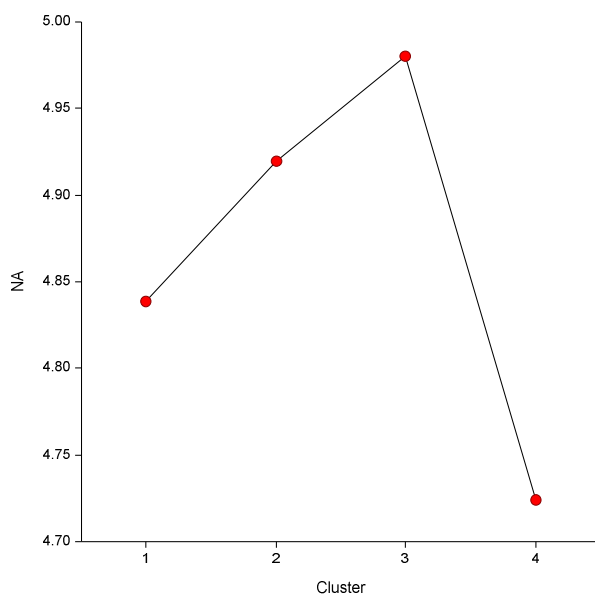
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 63    | 4.865783 |                   |
| A: Cluster |       |          |                   |
| 1          | 14    | 4.838785 | 0.1564027         |
| 2          | 16    | 4.919555 | 0.1463013         |
| 3          | 28    | 4.980492 | 0.1105934         |
| 4          | 5     | 4.724299 | 0.2617118         |
| B: Gender  |       |          |                   |
| 1          | 27    | 4.850727 | 0.1126228         |
| 2          | 36    | 4.880839 | 0.09753422        |

4/22/2014 10:08:37 AM 2

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Age = 1  
Response NA

**Plots Section**

4/22/2014 10:08:37 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 1  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.3424653 Critical Value=4.3306

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 14    | 4.838785 |                       |
| 2     | 16    | 4.919555 |                       |
| 3     | 28    | 4.980492 |                       |
| 4     | 5     | 4.724299 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.3424653 Critical Value=3.4811

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 4.850727 |                       |
| 2     | 36    | 4.880839 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.



4/22/2014 10:11:25 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 2  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 81 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 13.23826                           | 4.412754       | 3.81    | 0.013191*     | 0.653862 |
| B: Gender        | 1  | 4.664759                           | 4.664759       | 4.02    | 0.048235      | 0.338611 |
| S                | 81 | 93.93227                           | 1.159658       |         |               |          |
| Total (Adjusted) | 85 | 110.261                            |                |         |               |          |
| Total            | 86 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

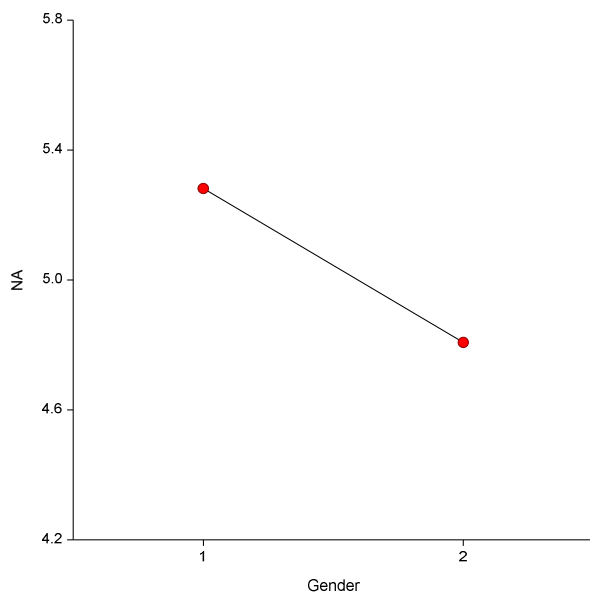
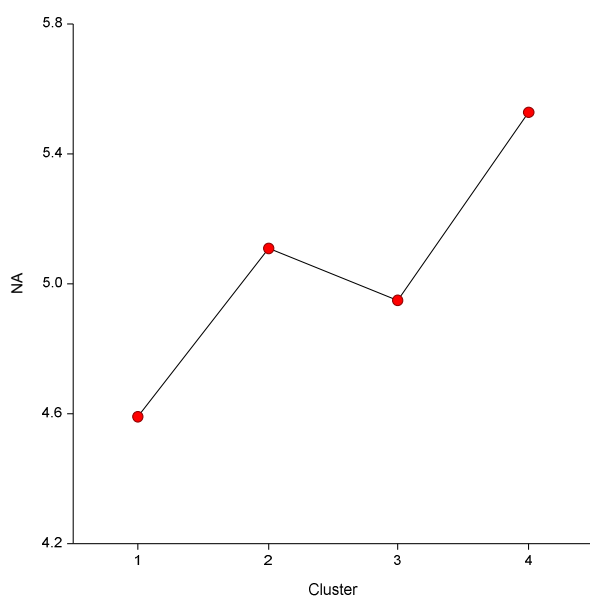
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 86    | 5.044344 |                   |
| A: Cluster |       |          |                   |
| 1          | 42    | 4.590684 | 0.1661653         |
| 2          | 11    | 5.110283 | 0.3246897         |
| 3          | 10    | 4.947541 | 0.3405375         |
| 4          | 23    | 5.528867 | 0.2245438         |
| B: Gender  |       |          |                   |
| 1          | 36    | 5.28205  | 0.179479          |
| 2          | 50    | 4.806638 | 0.152293          |

4/22/2014 10:11:25 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Age = 2  
Response NA

**Plots Section**

4/22/2014 10:11:25 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 2  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=81 MSE=1.159658 Critical Value=4.2823

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 42    | 4.590684 | 4                     |
| 2     | 11    | 5.110283 |                       |
| 3     | 10    | 4.947541 |                       |
| 4     | 23    | 5.528867 | 1                     |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=81 MSE=1.159658 Critical Value=3.4523

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 5.28205  |                       |
| 2     | 50    | 4.806638 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

4/22/2014 10:12:59 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 3  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 50 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 2.379488                           | 0.7931626      | 0.82    | 0.491592      | 0.106725 |
| B: Gender        | 1  | 2.739836                           | 2.739836       | 2.82    | 0.099590      | 0.224785 |
| S                | 50 | 48.65385                           | 0.9730769      |         |               |          |
| Total (Adjusted) | 54 | 54.44242                           |                |         |               |          |
| Total            | 55 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

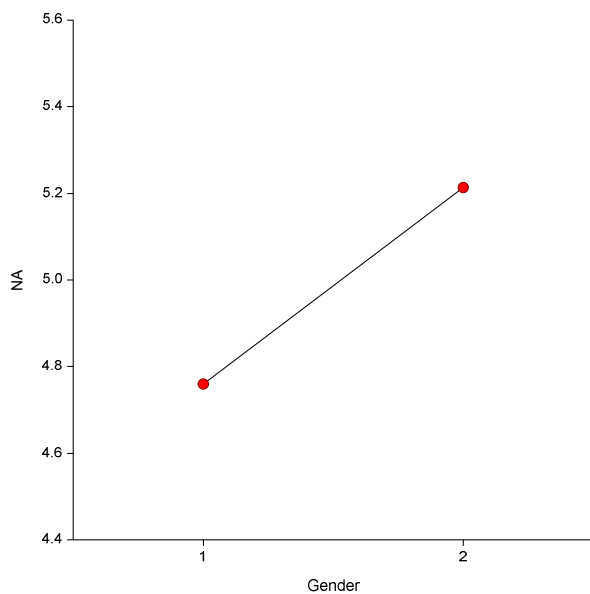
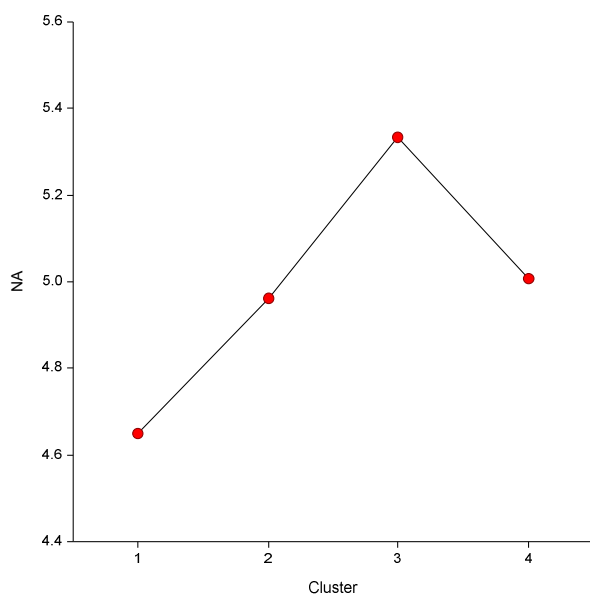
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 55    | 4.987436 |                   |
| A: Cluster |       |          |                   |
| 1          | 26    | 4.648498 | 0.1934581         |
| 2          | 16    | 4.961231 | 0.2466117         |
| 3          | 4     | 5.333333 | 0.4932233         |
| 4          | 9     | 5.006684 | 0.3288155         |
| B: Gender  |       |          |                   |
| 1          | 30    | 4.760614 | 0.1800997         |
| 2          | 25    | 5.214258 | 0.1972893         |

4/22/2014 10:12:59 AM 2

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Age = 3  
Response NA

**Plots Section**

4/22/2014 10:12:59 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 3  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=50 MSE=0.9730769 Critical Value=4.3582

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 26    | 4.648498 |                       |
| 2     | 16    | 4.961231 |                       |
| 3     | 4     | 5.333333 |                       |
| 4     | 9     | 5.006684 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=50 MSE=0.9730769 Critical Value=3.4976

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 30    | 4.760614 |                       |
| 2     | 25    | 5.214258 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

4/22/2014 10:25:48 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 1  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 87 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 0.2399022                          | 0.07996741     | 0.10    | 0.957339      | 0.036198 |
| B: Age           | 2  | 4.507903                           | 2.253951       | 2.94    | 0.058121      | 0.444353 |
| S                | 87 | 66.69081                           | 0.766561       |         |               |          |
| Total (Adjusted) | 92 | 71.62425                           |                |         |               |          |
| Total            | 93 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

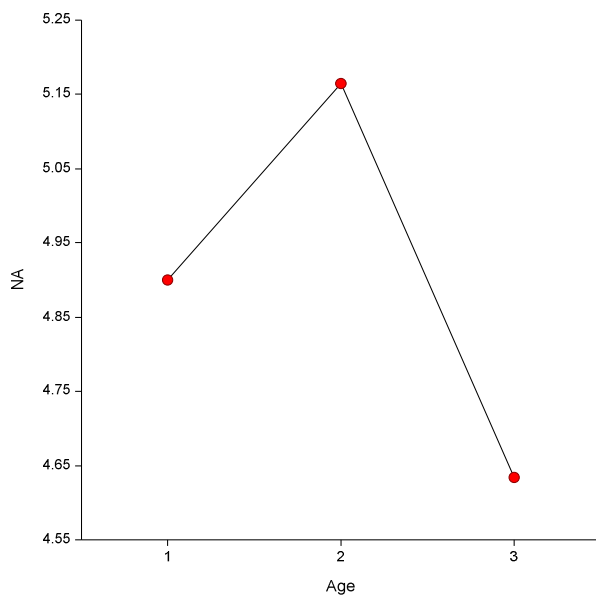
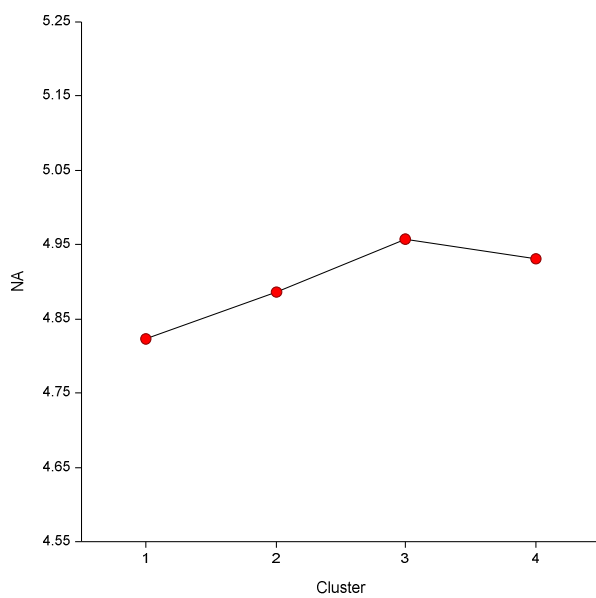
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 93    | 4.899562 |                   |
| A: Cluster |       |          |                   |
| 1          | 40    | 4.823536 | 0.1384342         |
| 2          | 15    | 4.886345 | 0.2260621         |
| 3          | 24    | 4.957018 | 0.1787178         |
| 4          | 14    | 4.931349 | 0.2339965         |
| B: Age     |       |          |                   |
| 1          | 27    | 4.899666 | 0.1684967         |
| 2          | 36    | 5.164517 | 0.1459225         |
| 3          | 30    | 4.634503 | 0.15985           |

4/22/2014 10:25:48 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Gender = 1  
Response NA

**Plots Section**



4/22/2014 10:25:48 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 1  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.766561 Critical Value=4.0819

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 40    | 4.823536 |                       |
| 2     | 15    | 4.886345 |                       |
| 3     | 24    | 4.957018 |                       |
| 4     | 14    | 4.931349 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.766561 Critical Value=3.7657

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 4.899666 |                       |
| 2     | 36    | 5.164517 |                       |
| 3     | 30    | 4.634503 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

4/22/2014 10:24:58 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 2  
 Response NA

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2   | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 105 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF  | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|-----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3   | 16.56077                           | 5.520255       | 6.11    | 0.000719*     | 0.920761 |
| B: Age           | 2   | 2.392393                           | 1.196196       | 1.32    | 0.270686      | 0.191952 |
| S                | 105 | 94.92226                           | 0.9040215      |         |               |          |
| Total (Adjusted) | 110 | 113.5651                           |                |         |               |          |
| Total            | 111 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

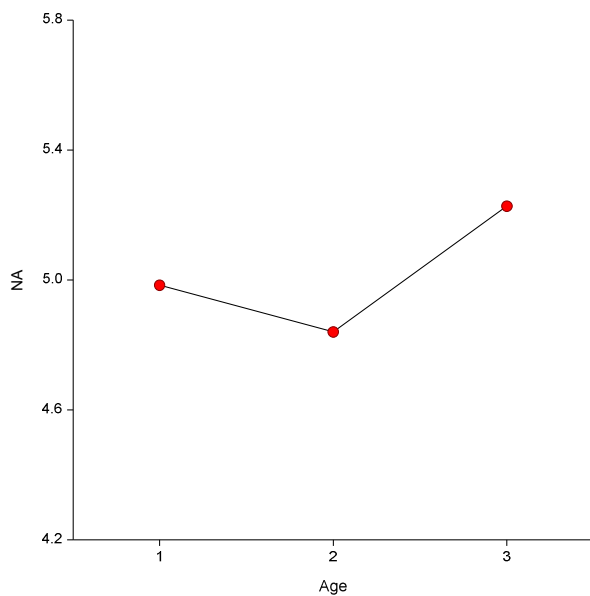
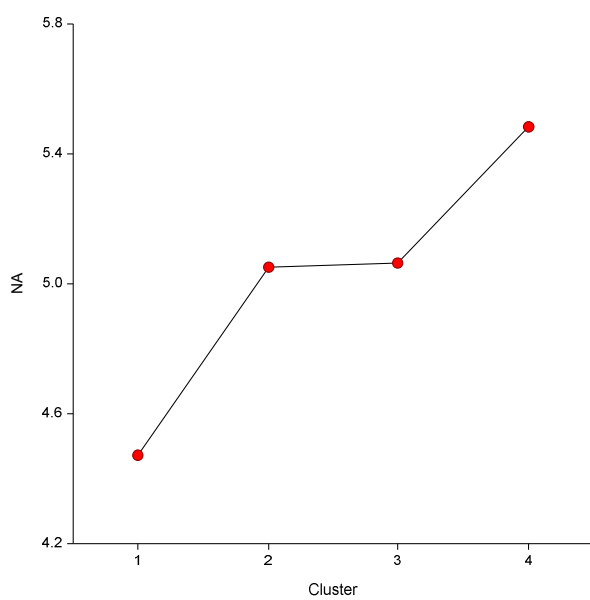
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 111   | 5.017149 |                   |
| A: Cluster |       |          |                   |
| 1          | 42    | 4.471208 | 0.1467117         |
| 2          | 28    | 5.050515 | 0.1796844         |
| 3          | 18    | 5.063669 | 0.2241058         |
| 4          | 23    | 5.483205 | 0.1982556         |
| B: Age     |       |          |                   |
| 1          | 36    | 4.98323  | 0.1584667         |
| 2          | 50    | 4.840144 | 0.1344635         |
| 3          | 25    | 5.228075 | 0.1901601         |

4/22/2014 10:24:58 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Gender = 2  
Response NA

**Plots Section**

4/22/2014 10:24:58 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 2  
 Response NA

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=105 MSE=0.9040215 Critical Value=4.0653

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 42    | 4.471208 | 4                     |
| 2     | 28    | 5.050515 |                       |
| 3     | 18    | 5.063669 |                       |
| 4     | 23    | 5.483205 | 1                     |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=105 MSE=0.9040215 Critical Value=3.7519

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 4.98323  |                       |
| 2     | 50    | 4.840144 |                       |
| 3     | 25    | 5.228075 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:04:48 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 194 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

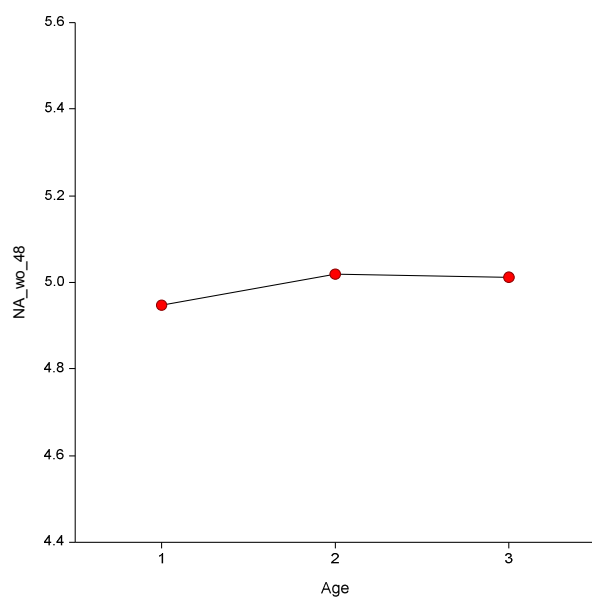
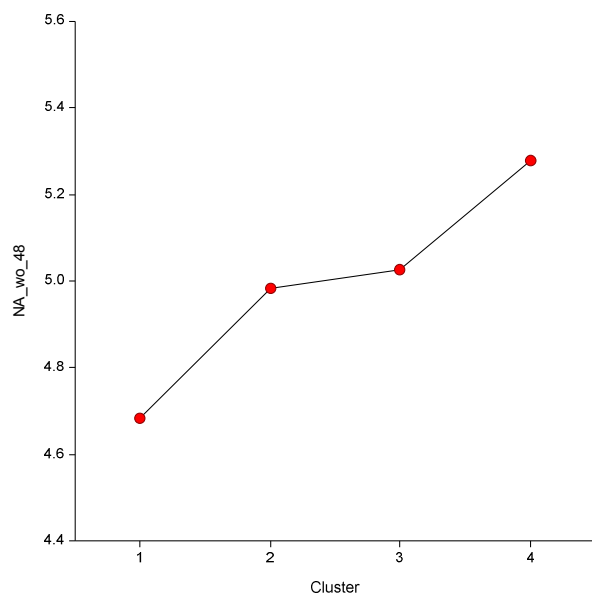
| Source<br>Term   | DF  | Sum of<br>Squares<br>(Alpha=0.05) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|-----|-----------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3   | 9.672942                          | 3.224314       | 3.97    | 0.008954*     | 0.828821 |
| B: Age           | 2   | 0.1566817                         | 0.07834086     | 0.10    | 0.908126      | 0.064547 |
| C: Gender        | 1   | 0.1318626                         | 0.1318626      | 0.16    | 0.687498      | 0.068604 |
| BC               | 2   | 8.636772                          | 4.318386       | 5.31    | 0.005659*     | 0.833654 |
| S                | 194 | 157.625                           | 0.8125002      |         |               |          |
| Total (Adjusted) | 202 | 175.8254                          |                |         |               |          |
| Total            | 203 |                                   |                |         |               |          |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

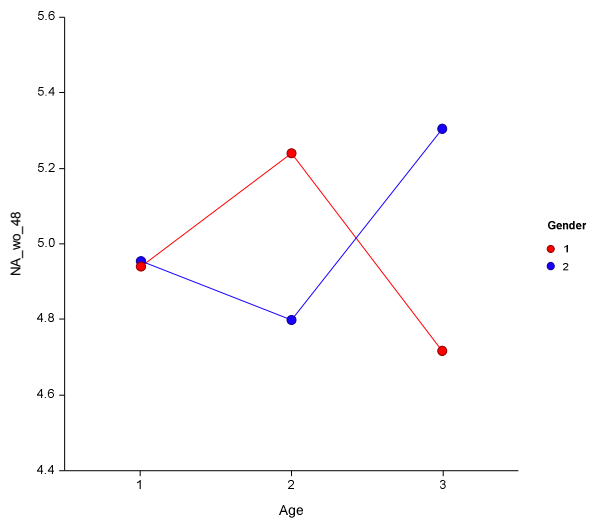
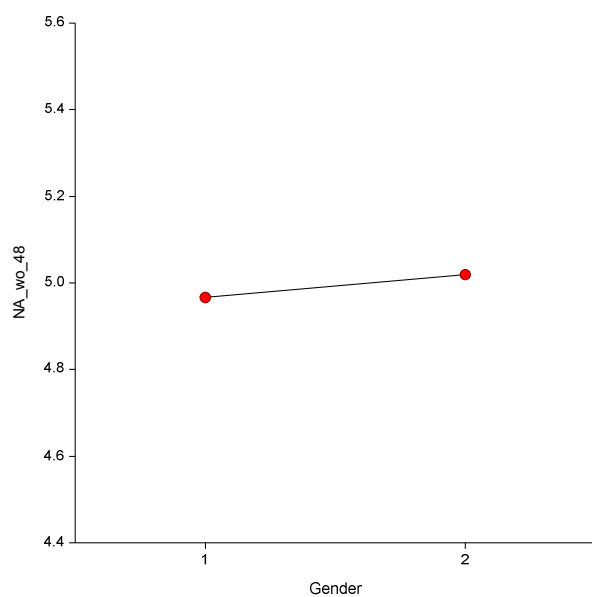
| Term            | Count | Mean     | Standard<br>Error |
|-----------------|-------|----------|-------------------|
| All             | 203   | 4.99271  |                   |
| A: Cluster      |       |          |                   |
| 1               | 81    | 4.683304 | 0.1001542         |
| 2               | 43    | 4.98404  | 0.1374604         |
| 3               | 42    | 5.025882 | 0.1390872         |
| 4               | 37    | 5.277612 | 0.1481873         |
| B: Age          |       |          |                   |
| 1               | 63    | 4.947877 | 0.1135642         |
| 2               | 86    | 5.019009 | 0.09719916        |
| 3               | 54    | 5.011242 | 0.1226634         |
| C: Gender       |       |          |                   |
| 1               | 93    | 4.965948 | 0.09346958        |
| 2               | 110   | 5.019472 | 0.08594397        |
| BC: Age, Gender |       |          |                   |
| 1,1             | 27    | 4.940382 | 0.1734722         |
| 1,2             | 36    | 4.955373 | 0.1502313         |
| 2,1             | 36    | 5.240117 | 0.1502313         |
| 2,2             | 50    | 4.797901 | 0.1274755         |
| 3,1             | 30    | 4.717344 | 0.1645702         |
| 3,2             | 24    | 5.305141 | 0.1839951         |

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**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
NA\_wo\_48**Plots Section**

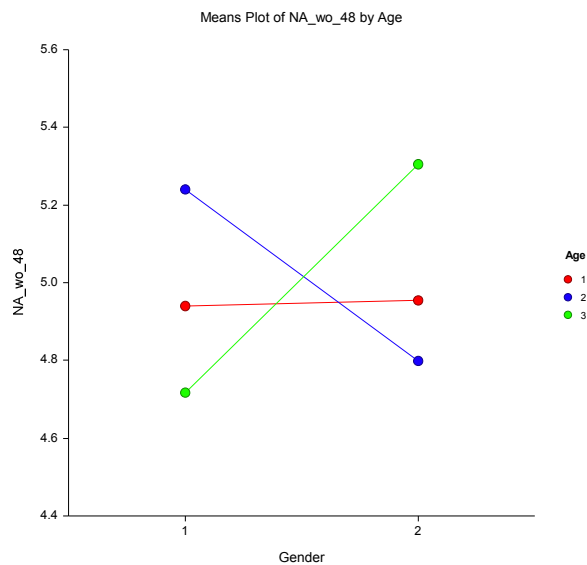
5/6/2014 9:04:48 AM 3

**Analysis of Variance Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Response NA\_wo\_48



5/6/2014 9:04:48 AM 4

**Analysis of Variance Report**  
 Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response NA\_wo\_48



**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48

Term A: Cluster

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.8125002 Critical Value=4.0288

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 81    | 4.683304 | 4                     |
| 2     | 43    | 4.98404  |                       |
| 3     | 42    | 5.025882 |                       |
| 4     | 37    | 5.277612 | 1                     |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.



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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Age

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.8125002 Critical Value=3.7218

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 4.947877 |                       |
| 2     | 86    | 5.019009 |                       |
| 3     | 54    | 5.011242 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term C: Gender

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.8125002 Critical Value=3.2022

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 4.965948 |                       |
| 2     | 110   | 5.019472 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:07:20 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 1  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 58 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 0.3468912                          | 0.1156304      | 0.34    | 0.798164      | 0.047403 |
| B: Gender        | 1  | 0.01186588                         | 0.01186588     | 0.03    | 0.852984      | 0.018834 |
| S                | 58 | 19.86299                           | 0.3424653      |         |               |          |
| Total (Adjusted) | 62 | 20.21517                           |                |         |               |          |
| Total            | 63 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

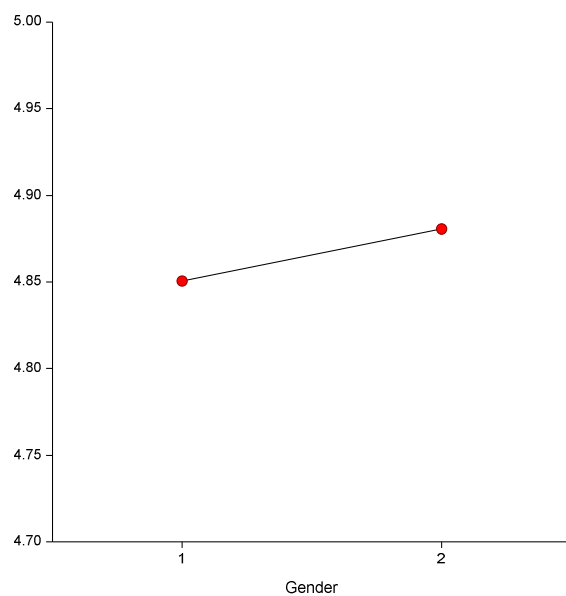
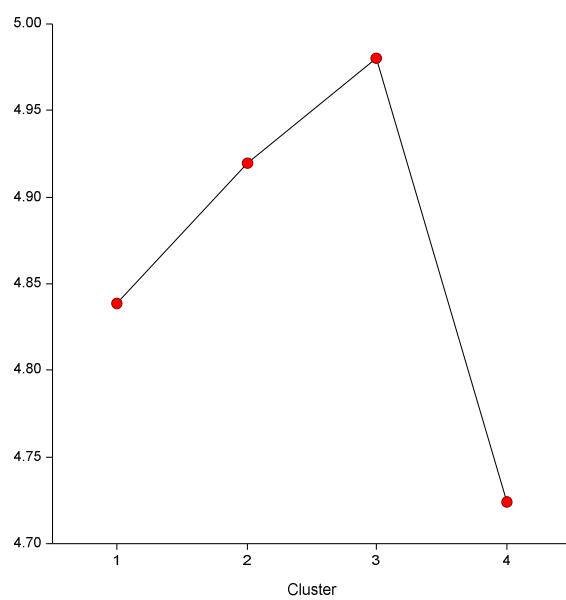
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 63    | 4.865783 |                   |
| A: Cluster |       |          |                   |
| 1          | 14    | 4.838785 | 0.1564027         |
| 2          | 16    | 4.919555 | 0.1463013         |
| 3          | 28    | 4.980492 | 0.1105934         |
| 4          | 5     | 4.724299 | 0.2617118         |
| B: Gender  |       |          |                   |
| 1          | 27    | 4.850727 | 0.1126228         |
| 2          | 36    | 4.880839 | 0.09753422        |

5/6/2014 9:07:20 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Filter Age = 1  
Response NA\_wo\_48

**Plots Section**

5/6/2014 9:07:20 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 1  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.3424653 Critical Value=4.3306

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 14    | 4.838785 |                       |
| 2     | 16    | 4.919555 |                       |
| 3     | 28    | 4.980492 |                       |
| 4     | 5     | 4.724299 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.3424653 Critical Value=3.4811

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 4.850727 |                       |
| 2     | 36    | 4.880839 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:08:13 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 2  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 81 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 13.23826                           | 4.412754       | 3.81    | 0.013191*     | 0.653862 |
| B: Gender        | 1  | 4.664759                           | 4.664759       | 4.02    | 0.048235      | 0.338611 |
| S                | 81 | 93.93227                           | 1.159658       |         |               |          |
| Total (Adjusted) | 85 | 110.261                            |                |         |               |          |
| Total            | 86 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

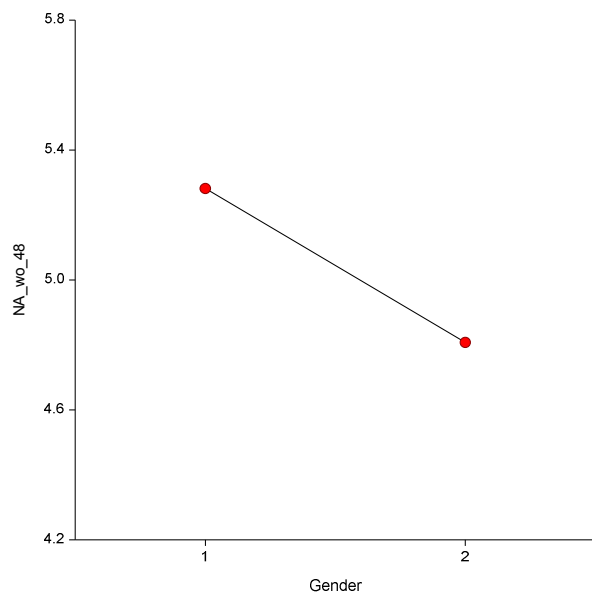
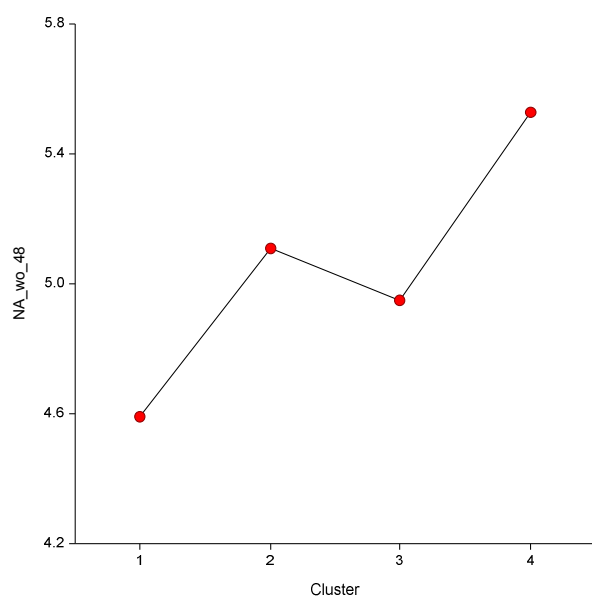
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 86    | 5.044344 |                   |
| A: Cluster |       |          |                   |
| 1          | 42    | 4.590684 | 0.1661653         |
| 2          | 11    | 5.110283 | 0.3246897         |
| 3          | 10    | 4.947541 | 0.3405375         |
| 4          | 23    | 5.528867 | 0.2245438         |
| B: Gender  |       |          |                   |
| 1          | 36    | 5.28205  | 0.179479          |
| 2          | 50    | 4.806638 | 0.152293          |

5/6/2014 9:08:13 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Filter Age = 2  
Response NA\_wo\_48

**Plots Section**

5/6/2014 9:08:13 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 2  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=81 MSE=1.159658 Critical Value=4.2823

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 42    | 4.590684 | 4                     |
| 2     | 11    | 5.110283 |                       |
| 3     | 10    | 4.947541 |                       |
| 4     | 23    | 5.528867 | 1                     |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=81 MSE=1.159658 Critical Value=3.4523

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 5.28205  |                       |
| 2     | 50    | 4.806638 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:09:03 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 3  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 49 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 1.180947                           | 0.3936489      | 0.50    | 0.685419      | 0.064760 |
| B: Gender        | 1  | 4.718532                           | 4.718532       | 5.97    | 0.018212      | 0.494173 |
| S                | 49 | 38.73664                           | 0.7905438      |         |               |          |
| Total (Adjusted) | 53 | 45.31276                           |                |         |               |          |
| Total            | 54 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

**Means and Standard Error Section**

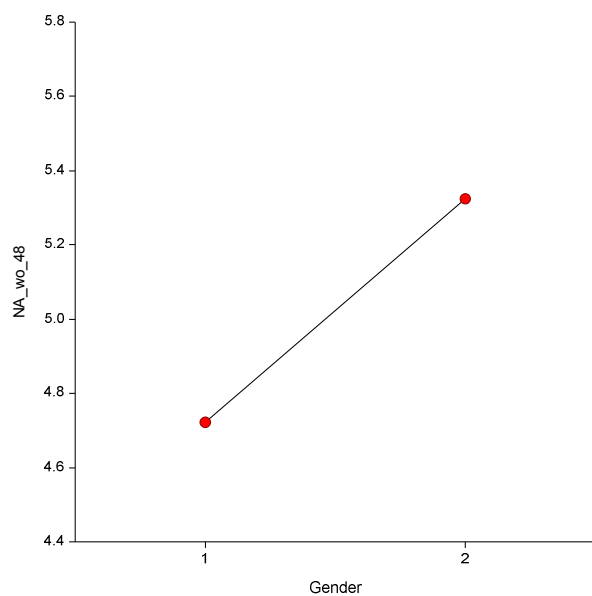
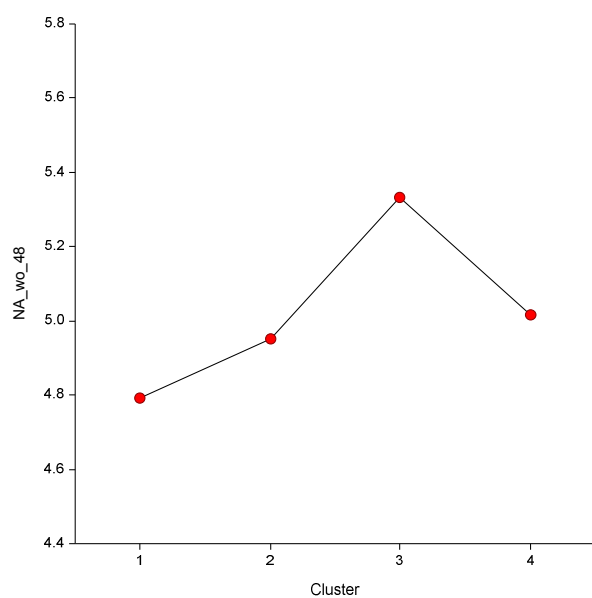
| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 54    | 5.022869 |                   |
| A: Cluster |       |          |                   |
| 1          | 25    | 4.791274 | 0.1778251         |
| 2          | 16    | 4.951812 | 0.2222813         |
| 3          | 4     | 5.333333 | 0.4445626         |
| 4          | 9     | 5.015056 | 0.2963751         |
| B: Gender  |       |          |                   |
| 1          | 30    | 4.720702 | 0.1623313         |
| 2          | 24    | 5.325036 | 0.1814919         |



5/6/2014 9:09:03 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Filter Age = 3  
Response NA\_wo\_48

**Plots Section**

5/6/2014 9:09:03 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Age = 3  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=49 MSE=0.7905438 Critical Value=4.3623

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 25    | 4.791274 |                       |
| 2     | 16    | 4.951812 |                       |
| 3     | 4     | 5.333333 |                       |
| 4     | 9     | 5.015056 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=49 MSE=0.7905438 Critical Value=3.5001

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 30    | 4.720702 | 2                     |
| 2     | 24    | 5.325036 | 1                     |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:10:00 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Gender = 1  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 87 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 0.2399022                          | 0.07996741     | 0.10    | 0.957339      | 0.036198 |
| B: Age           | 2  | 4.507903                           | 2.253951       | 2.94    | 0.058121      | 0.444353 |
| S                | 87 | 66.69081                           | 0.766561       |         |               |          |
| Total (Adjusted) | 92 | 71.62425                           |                |         |               |          |
| Total            | 93 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

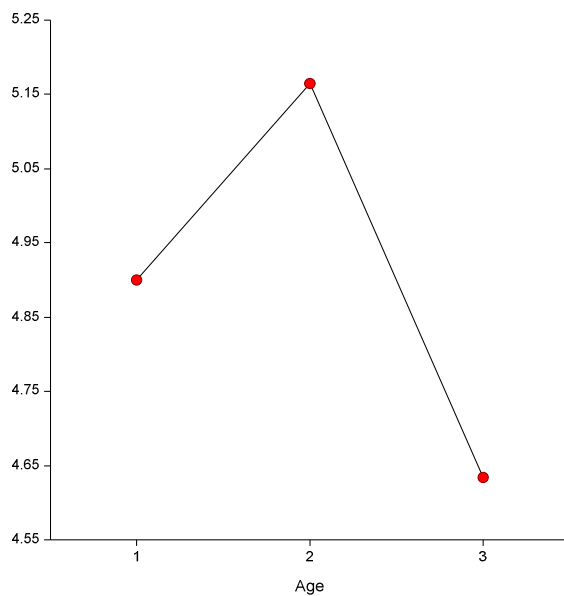
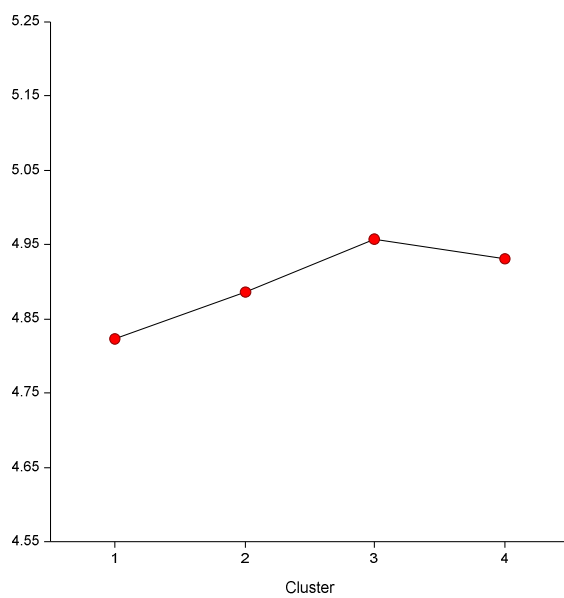
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 93    | 4.899562 |                   |
| A: Cluster |       |          |                   |
| 1          | 40    | 4.823536 | 0.1384342         |
| 2          | 15    | 4.886345 | 0.2260621         |
| 3          | 24    | 4.957018 | 0.1787178         |
| 4          | 14    | 4.931349 | 0.2339965         |
| B: Age     |       |          |                   |
| 1          | 27    | 4.899666 | 0.1684967         |
| 2          | 36    | 5.164517 | 0.1459225         |
| 3          | 30    | 4.634503 | 0.15985           |

5/6/2014 9:10:00 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Filter Gender = 1  
Response NA\_wo\_48

**Plots Section**

5/6/2014 9:10:00 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Gender = 1  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.766561 Critical Value=4.0819

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 40    | 4.823536 |                       |
| 2     | 15    | 4.886345 |                       |
| 3     | 24    | 4.957018 |                       |
| 4     | 14    | 4.931349 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.766561 Critical Value=3.7657

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 4.899666 |                       |
| 2     | 36    | 5.164517 |                       |
| 3     | 30    | 4.634503 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

5/6/2014 9:10:42 AM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Gender = 2  
 Response NA\_wo\_48

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2   | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 104 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF  | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|-----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3   | 14.03379                           | 4.677929       | 5.64    | 0.001283*     | 0.894511 |
| B: Age           | 2   | 4.123753                           | 2.061877       | 2.48    | 0.088363      | 0.376074 |
| S                | 104 | 86.3335                            | 0.8301298      |         |               |          |
| Total (Adjusted) | 109 | 104.1992                           |                |         |               |          |
| Total            | 110 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

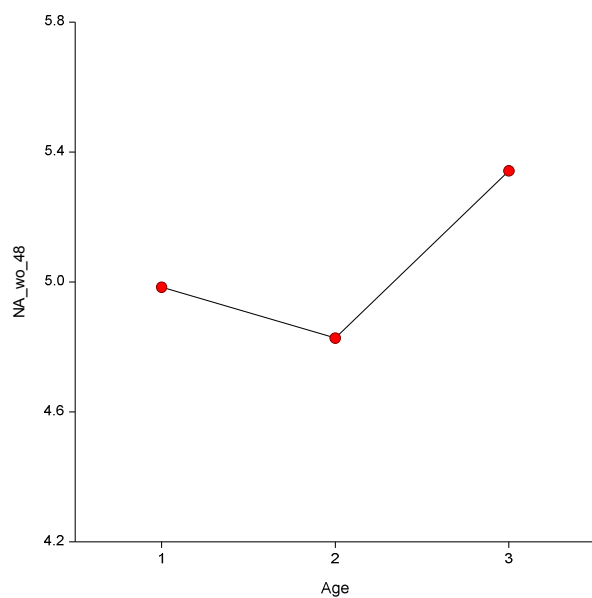
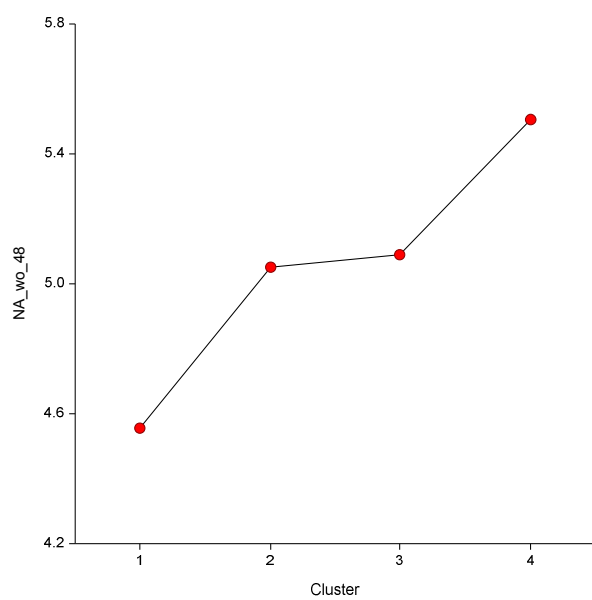
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 110   | 5.050534 |                   |
| A: Cluster |       |          |                   |
| 1          | 41    | 4.556538 | 0.1422922         |
| 2          | 28    | 5.050698 | 0.1721845         |
| 3          | 18    | 5.089017 | 0.2147518         |
| 4          | 23    | 5.505883 | 0.1899805         |
| B: Age     |       |          |                   |
| 1          | 36    | 4.98329  | 0.1518524         |
| 2          | 50    | 4.826113 | 0.1288511         |
| 3          | 24    | 5.3422   | 0.1859805         |

5/6/2014 9:10:42 AM 2

**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Filter Gender = 2  
Response NA\_wo\_48

**Plots Section**

5/6/2014 9:10:42 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Filter Gender = 2  
 Response NA\_wo\_48

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=104 MSE=0.8301298 Critical Value=4.0661

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 41    | 4.556538 | 4                     |
| 2     | 28    | 5.050698 |                       |
| 3     | 18    | 5.089017 |                       |
| 4     | 23    | 5.505883 | 1                     |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: NA\_wo\_48  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=104 MSE=0.8301298 Critical Value=3.7526

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 4.98329  |                       |
| 2     | 50    | 4.826113 |                       |
| 3     | 24    | 5.3422   |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.



**APPENDIX G****APPARENT SINCERITY DIMENSION ANALYSIS OUTPUT**

4/17/2014 2:27:00 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response AS

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 195 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

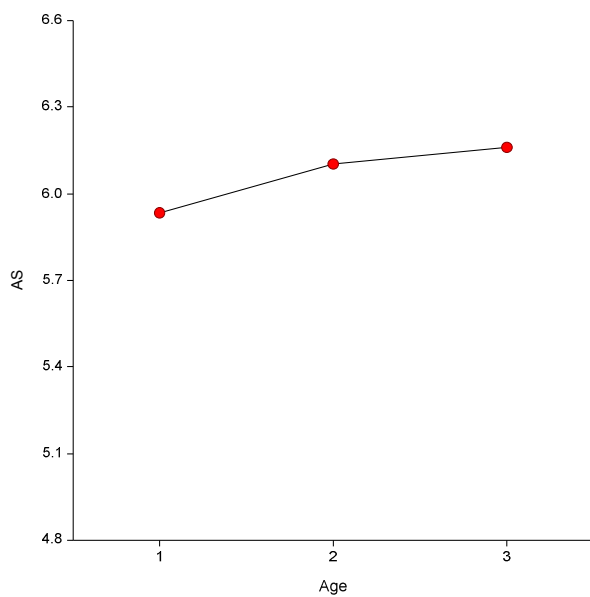
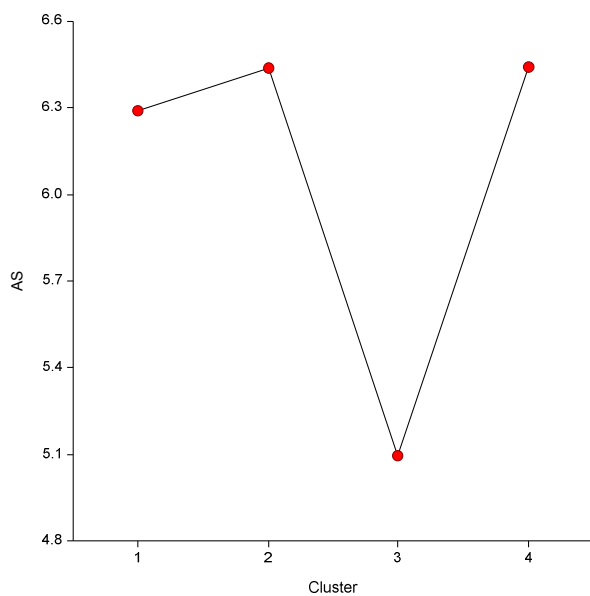
| Source<br>Term   | DF  | Sum of<br>Squares | Mean<br>Square | F-Ratio | Prob<br>Level | Power<br>(Alpha=0.05) |
|------------------|-----|-------------------|----------------|---------|---------------|-----------------------|
| A: Cluster       | 3   | 42.66699          | 14.22233       | 54.09   | 0.000000*     | 1.000000              |
| B: Age           | 2   | 1.353849          | 0.6769245      | 2.57    | 0.078778      | 0.509608              |
| C: Gender        | 1   | 0.03229094        | 0.03229094     | 0.12    | 0.726383      | 0.064044              |
| BC               | 2   | 0.1612966         | 0.08064828     | 0.31    | 0.736205      | 0.098310              |
| S                | 195 | 51.27161          | 0.2629313      |         |               |                       |
| Total (Adjusted) | 203 | 115.9493          |                |         |               |                       |
| Total            | 204 |                   |                |         |               |                       |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

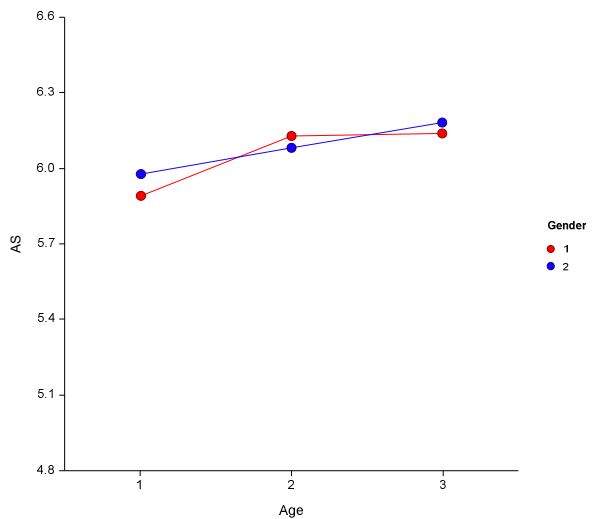
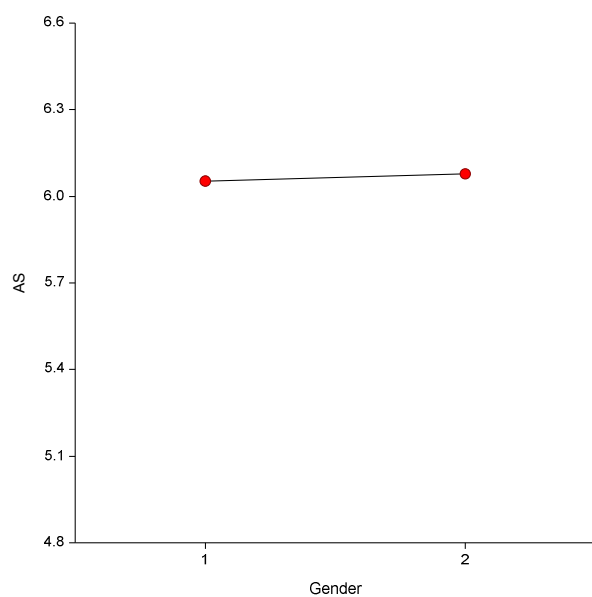
| Term            | Count | Mean     | Standard<br>Error |
|-----------------|-------|----------|-------------------|
| All             | 204   | 6.066257 |                   |
| A: Cluster      |       |          |                   |
| 1               | 82    | 6.289218 | 0.05662579        |
| 2               | 43    | 6.438948 | 0.07819644        |
| 3               | 42    | 5.095472 | 0.07912187        |
| 4               | 37    | 6.441388 | 0.08429859        |
| B: Age          |       |          |                   |
| 1               | 63    | 5.933866 | 0.06460273        |
| 2               | 86    | 6.104042 | 0.05529323        |
| 3               | 55    | 6.160861 | 0.06914166        |
| C: Gender       |       |          |                   |
| 1               | 93    | 6.05308  | 0.0531716         |
| 2               | 111   | 6.079433 | 0.04866982        |
| BC: Age, Gender |       |          |                   |
| 1,1             | 27    | 5.89073  | 0.09868231        |
| 1,2             | 36    | 5.977002 | 0.08546139        |
| 2,1             | 36    | 6.127743 | 0.08546139        |
| 2,2             | 50    | 6.080341 | 0.07251639        |
| 3,1             | 30    | 6.140767 | 0.09361825        |
| 3,2             | 25    | 6.180955 | 0.1025537         |

4/17/2014 2:27:00 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
AS**Plots Section**

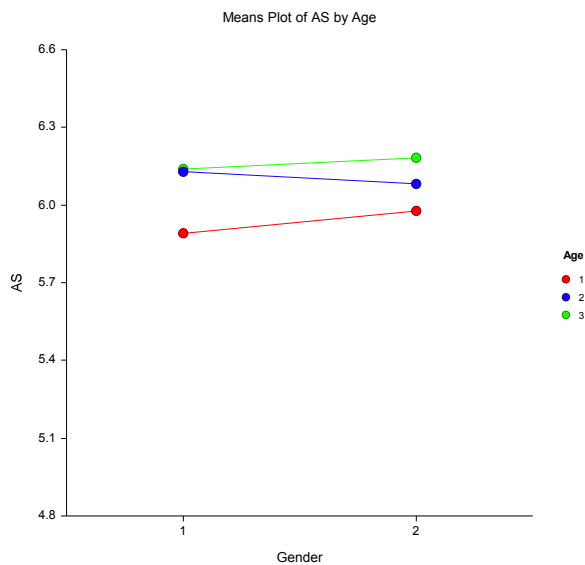
4/17/2014 2:27:00 PM 3

**Analysis of Variance Report**  
Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
AS



4/17/2014 2:27:00 PM 4

**Analysis of Variance Report**  
 Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 AS



**Tukey-Kramer Multiple-Comparison Test**

Response: AS  
 Term A: Cluster

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.2629313 Critical Value=3.6714

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 82    | 6.289218 | 3                     |
| 2     | 43    | 6.438948 | 3                     |
| 3     | 42    | 5.095472 | 1, 2, 4               |
| 4     | 37    | 6.441388 | 3                     |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

4/17/2014 2:27:00 PM 5

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response AS

**Tukey-Kramer Multiple-Comparison Test**

Response: AS  
 Term B: Age

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.2629313 Critical Value=3.3475

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 5.933866 | 3                     |
| 2     | 86    | 6.104042 |                       |
| 3     | 55    | 6.160861 | 1                     |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: AS  
 Term C: Gender

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.2629313 Critical Value=2.7973

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 6.05308  |                       |
| 2     | 111   | 6.079433 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**APPENDIX H****SOCIAL ASTUTENESS DIMENSION ANALYSIS OUTPUT**

4/17/2014 2:30:11 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response SA

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 195 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF  | Sum of<br>Squares | Mean<br>Square | F-Ratio | Prob<br>Level | Power<br>(Alpha=0.05) |
|------------------|-----|-------------------|----------------|---------|---------------|-----------------------|
| A: Cluster       | 3   | 17.65854          | 5.886178       | 11.40   | 0.000001*     | 0.999405              |
| B: Age           | 2   | 0.1928414         | 0.0964207      | 0.19    | 0.829746      | 0.078742              |
| C: Gender        | 1   | 0.1755637         | 0.1755637      | 0.34    | 0.560414      | 0.089392              |
| BC               | 2   | 2.956358          | 1.478179       | 2.86    | 0.059445      | 0.556142              |
| S                | 195 | 100.6453          | 0.5161296      |         |               |                       |
| Total (Adjusted) | 203 | 121.5059          |                |         |               |                       |
| Total            | 204 |                   |                |         |               |                       |

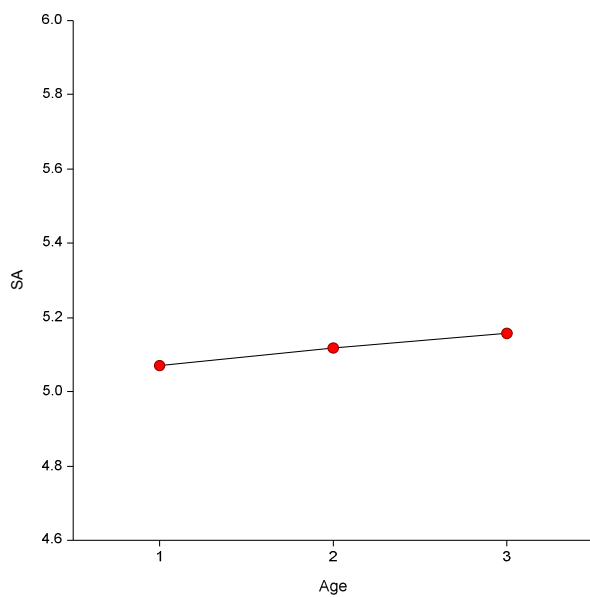
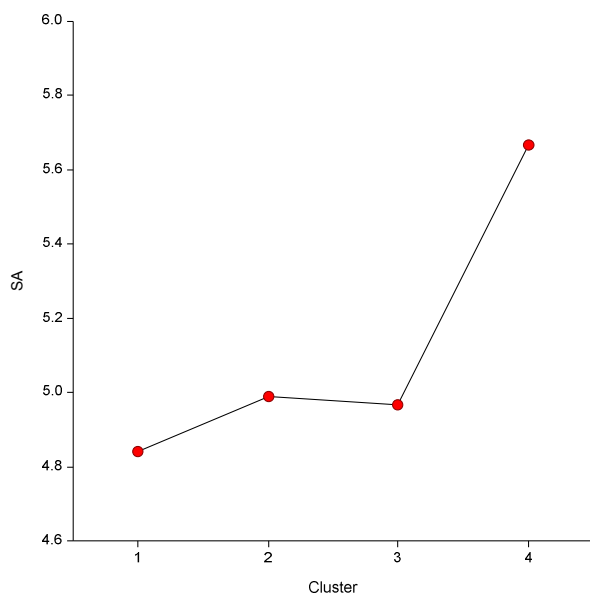
\* Term significant at alpha = 0.05

**Means and Standard Error Section**

| Term           | Count | Mean     | Standard<br>Error |
|----------------|-------|----------|-------------------|
| All            | 204   | 5.115789 |                   |
| A: Cluster     |       |          |                   |
| 1              | 82    | 4.840032 | 0.0793364         |
| 2              | 43    | 4.9894   | 0.1095583         |
| 3              | 42    | 4.966786 | 0.1108549         |
| 4              | 37    | 5.666939 | 0.1181078         |
| B: Age         |       |          |                   |
| 1              | 63    | 5.069616 | 0.09051261        |
| 2              | 86    | 5.11933  | 0.07746939        |
| 3              | 55    | 5.158422 | 0.09687195        |
| C: Gender      |       |          |                   |
| 1              | 93    | 5.085066 | 0.07449685        |
| 2              | 111   | 5.146513 | 0.06818956        |
| BC: Age,Gender |       |          |                   |
| 1,1            | 27    | 5.034796 | 0.1382603         |
| 1,2            | 36    | 5.104435 | 0.1197369         |
| 2,1            | 36    | 5.239098 | 0.1197369         |
| 2,2            | 50    | 4.999563 | 0.1016002         |
| 3,1            | 30    | 4.981303 | 0.1311652         |
| 3,2            | 25    | 5.335539 | 0.1436843         |

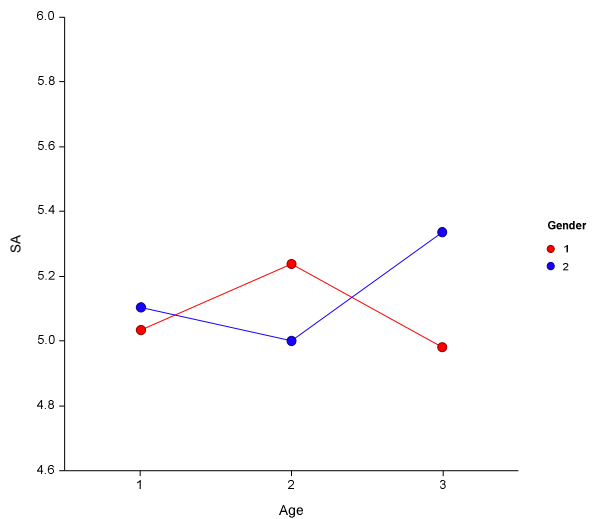
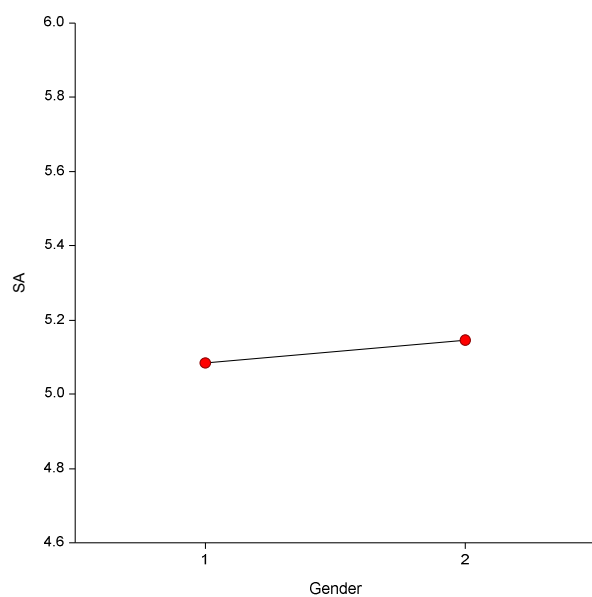


4/17/2014 2:30:11 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
SA**Plots Section**

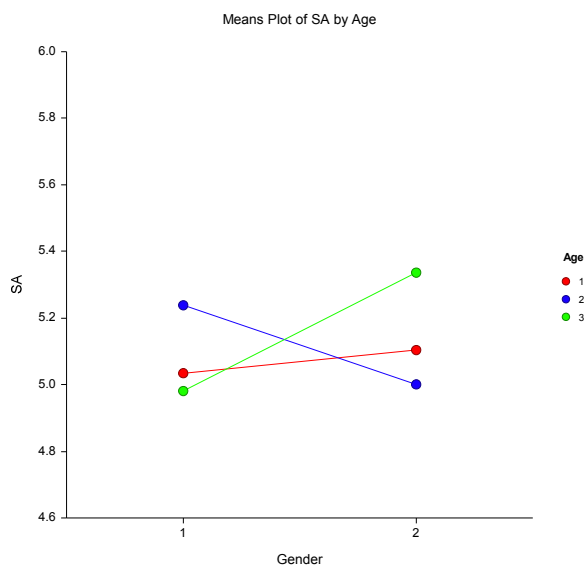
4/17/2014 2:30:11 PM 3

**Analysis of Variance Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Response SA



4/17/2014 2:30:11 PM 4

**Analysis of Variance Report**  
 Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response SA



**Tukey-Kramer Multiple-Comparison Test**

Response: SA  
 Term A: Cluster

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.5161296 Critical Value=3.6714

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 82    | 4.840032 | 4                     |
| 2     | 43    | 4.9894   | 4                     |
| 3     | 42    | 4.966786 | 4                     |
| 4     | 37    | 5.666939 | 1, 2, 3               |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

4/17/2014 2:30:11 PM 5

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response SA

**Tukey-Kramer Multiple-Comparison Test**

Response: SA  
 Term B: Age

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.5161296 Critical Value=3.3475

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 5.069616 |                       |
| 2     | 86    | 5.11933  |                       |
| 3     | 55    | 5.158422 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: SA  
 Term C: Gender

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.5161296 Critical Value=2.7973

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 5.085066 |                       |
| 2     | 111   | 5.146513 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**APPENDIX I****INTERPERSONAL INFLUENCE DIMENSION ANALYSIS OUTPUT**

4/17/2014 2:30:43 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response II

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 195 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

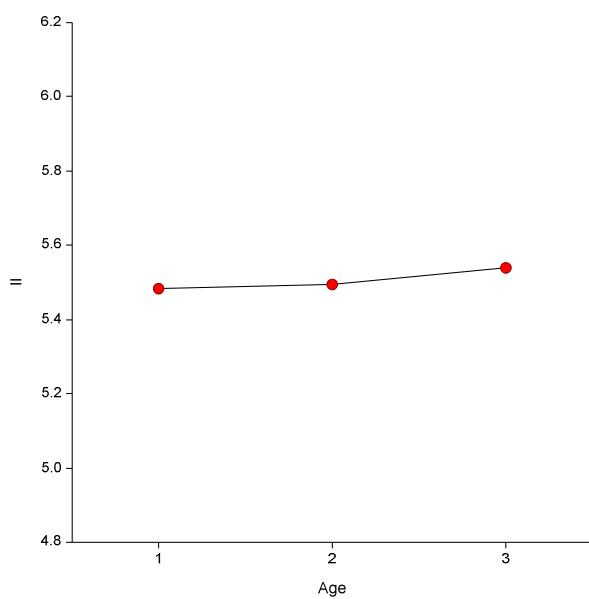
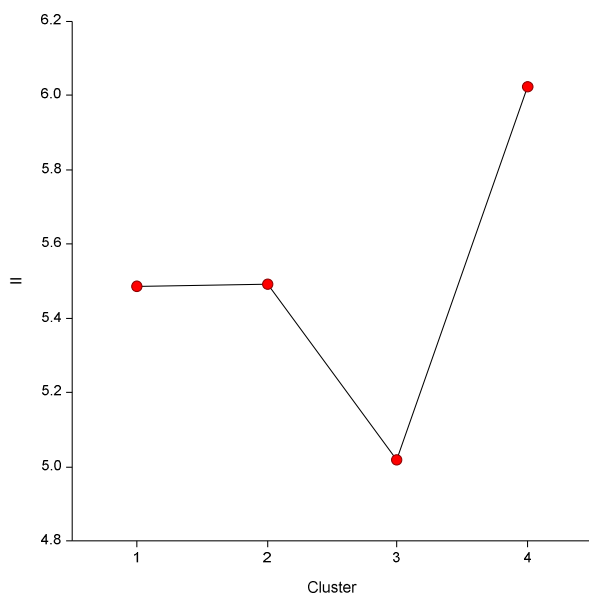
| Source<br>Term   | DF  | Sum of<br>Squares | Mean<br>Square | F-Ratio | Prob<br>Level | Power<br>(Alpha=0.05) |
|------------------|-----|-------------------|----------------|---------|---------------|-----------------------|
| A: Cluster       | 3   | 16.47585          | 5.49195        | 14.57   | 0.000000*     | 0.999965              |
| B: Age           | 2   | 0.0923988         | 0.0461994      | 0.12    | 0.884686      | 0.068606              |
| C: Gender        | 1   | 0.1013792         | 0.1013792      | 0.27    | 0.604571      | 0.081035              |
| BC               | 2   | 0.6485912         | 0.3242956      | 0.86    | 0.424514      | 0.196606              |
| S                | 195 | 73.48204          | 0.376831       |         |               |                       |
| Total (Adjusted) | 203 | 94.68995          |                |         |               |                       |
| Total            | 204 |                   |                |         |               |                       |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

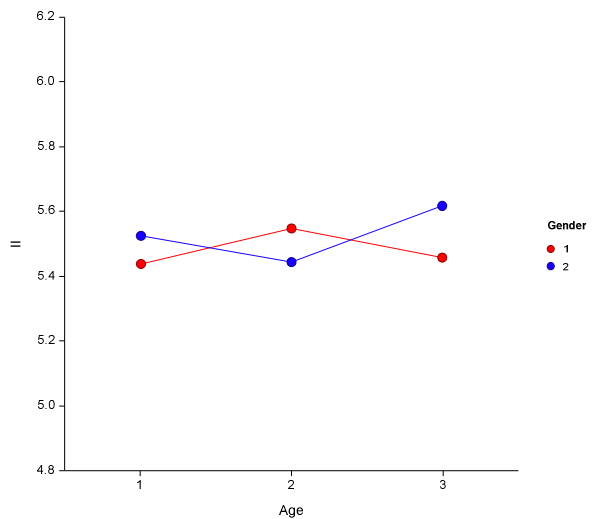
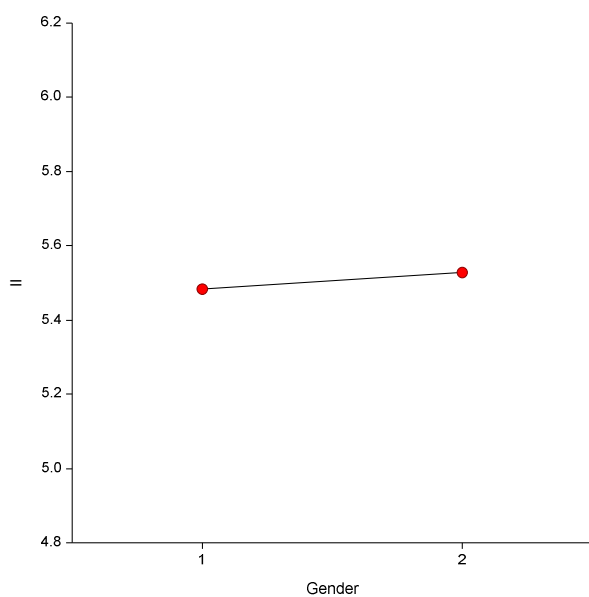
| Term            | Count | Mean     | Standard<br>Error |
|-----------------|-------|----------|-------------------|
| All             | 204   | 5.505242 |                   |
| A: Cluster      |       |          |                   |
| 1               | 82    | 5.487272 | 0.06779011        |
| 2               | 43    | 5.490824 | 0.09361362        |
| 3               | 42    | 5.019487 | 0.09472152        |
| 4               | 37    | 6.023388 | 0.1009189         |
| B: Age          |       |          |                   |
| 1               | 63    | 5.481867 | 0.0773398         |
| 2               | 86    | 5.495205 | 0.06619483        |
| 3               | 55    | 5.538656 | 0.08277363        |
| C: Gender       |       |          |                   |
| 1               | 93    | 5.481896 | 0.0636549         |
| 2               | 111   | 5.528589 | 0.05826554        |
| BC: Age, Gender |       |          |                   |
| 1,1             | 27    | 5.439075 | 0.1181385         |
| 1,2             | 36    | 5.524659 | 0.1023109         |
| 2,1             | 36    | 5.547637 | 0.1023109         |
| 2,2             | 50    | 5.442773 | 0.08681371        |
| 3,1             | 30    | 5.458975 | 0.112076          |
| 3,2             | 25    | 5.618336 | 0.1227731         |

4/17/2014 2:30:43 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
II**Plots Section**

4/17/2014 2:30:43 PM 3

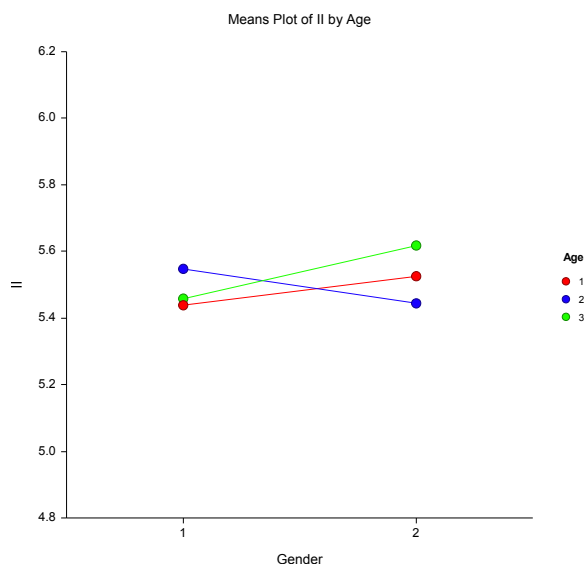
**Analysis of Variance Report**  
Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
II





4/17/2014 2:30:43 PM 4

**Analysis of Variance Report**  
 Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 II



**Tukey-Kramer Multiple-Comparison Test**

Response: II  
 Term A: Cluster

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.376831 Critical Value=3.6714

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 82    | 5.487272 | 3, 4                  |
| 2     | 43    | 5.490824 | 3, 4                  |
| 3     | 42    | 5.019487 | 1, 2, 4               |
| 4     | 37    | 6.023388 | 1, 2, 3               |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

4/17/2014 2:30:44 PM 5

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response II

**Tukey-Kramer Multiple-Comparison Test**

Response: II  
 Term B: Age

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.376831 Critical Value=3.3475

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 5.481867 |                       |
| 2     | 86    | 5.495205 |                       |
| 3     | 55    | 5.538656 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: II  
 Term C: Gender

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.376831 Critical Value=2.7973

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 5.481896 |                       |
| 2     | 111   | 5.528589 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

5/2/2014 6:15:31 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response II\_wo\_56

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 194 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

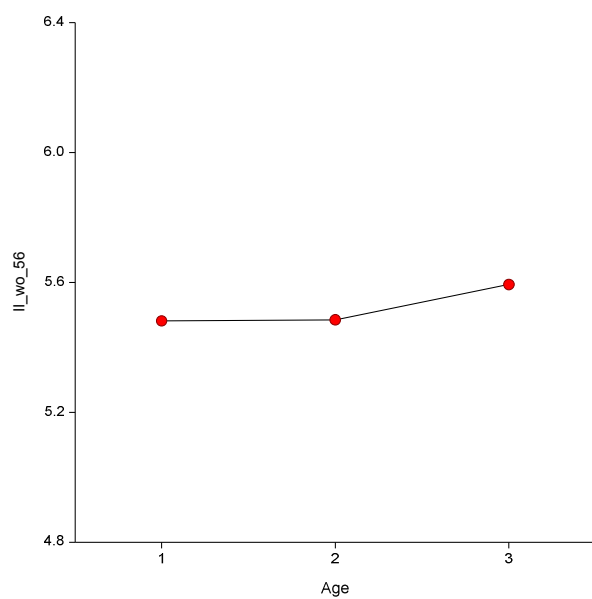
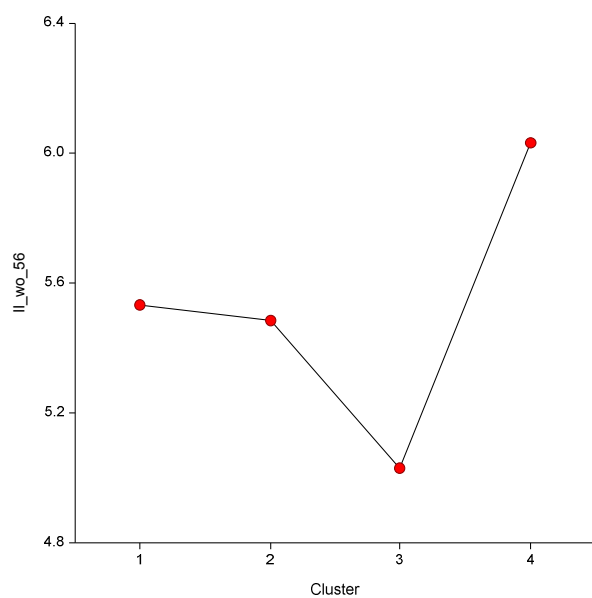
| Source<br>Term   | DF  | Sum of<br>Squares<br>(Alpha=0.05) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|-----|-----------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3   | 16.25606                          | 5.418688       | 16.19   | 0.000000*     | 0.999992 |
| B: Age           | 2   | 0.4304059                         | 0.215203       | 0.64    | 0.526894      | 0.156742 |
| C: Gender        | 1   | 0.3728536                         | 0.3728536      | 1.11    | 0.292564      | 0.182769 |
| BC               | 2   | 1.22173                           | 0.6108652      | 1.82    | 0.164000      | 0.377793 |
| S                | 194 | 64.94141                          | 0.3347495      |         |               |          |
| Total (Adjusted) | 202 | 87.18473                          |                |         |               |          |
| Total            | 203 |                                   |                |         |               |          |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

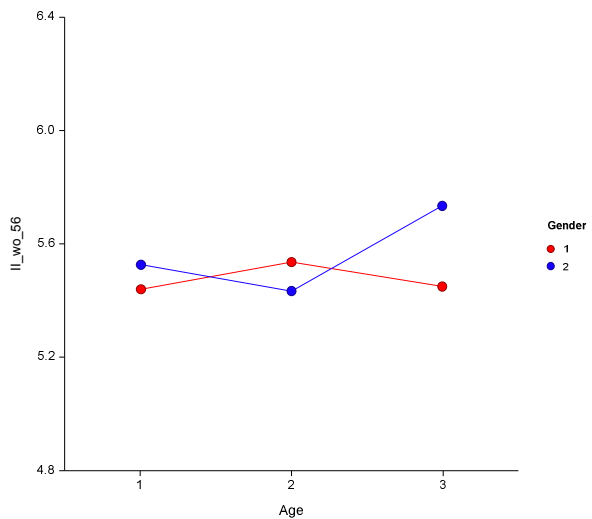
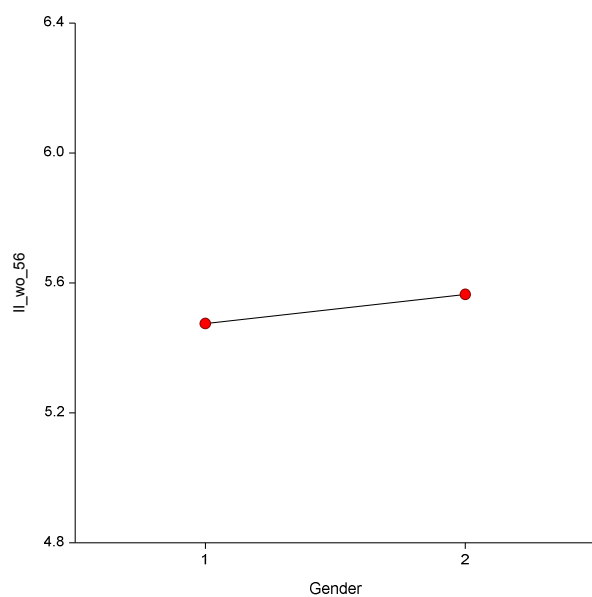
| Term            | Count | Mean     | Standard<br>Error |
|-----------------|-------|----------|-------------------|
| All             | 203   | 5.519895 |                   |
| A: Cluster      |       |          |                   |
| 1               | 81    | 5.531217 | 0.06428616        |
| 2               | 43    | 5.484921 | 0.08823193        |
| 3               | 42    | 5.030837 | 0.08927613        |
| 4               | 37    | 6.032604 | 0.09511722        |
| B: Age          |       |          |                   |
| 1               | 63    | 5.482539 | 0.07289366        |
| 2               | 86    | 5.485006 | 0.0623894         |
| 3               | 54    | 5.59214  | 0.07873414        |
| C: Gender       |       |          |                   |
| 1               | 93    | 5.474893 | 0.05999548        |
| 2               | 110   | 5.564897 | 0.055165          |
| BC: Age, Gender |       |          |                   |
| 1,1             | 27    | 5.440183 | 0.1113469         |
| 1,2             | 36    | 5.524894 | 0.09642924        |
| 2,1             | 36    | 5.535223 | 0.09642924        |
| 2,2             | 50    | 5.434789 | 0.08182292        |
| 3,1             | 30    | 5.449275 | 0.1056329         |
| 3,2             | 24    | 5.735006 | 0.1181012         |

5/2/2014 6:15:31 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
II\_wo\_56**Plots Section**

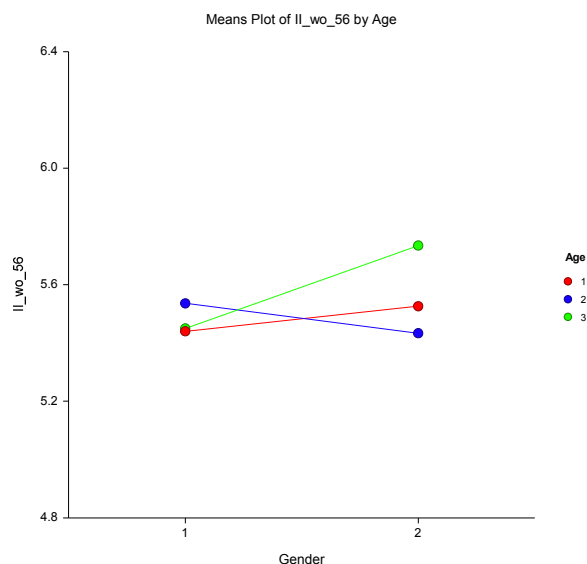
5/2/2014 6:15:31 PM 3

**Analysis of Variance Report**  
Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
Response II\_wo\_56



5/2/2014 6:15:32 PM 4

**Analysis of Variance Report**  
 Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response II\_wo\_56



### Tukey-Kramer Multiple-Comparison Test

Response: II\_wo\_56

Term A: Cluster

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.3347495 Critical Value=4.0288

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 81    | 5.531217 | 3, 4                  |
| 2     | 43    | 5.484921 | 3, 4                  |
| 3     | 42    | 5.030837 | 1, 2, 4               |
| 4     | 37    | 6.032604 | 1, 2, 3               |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

5/2/2014 6:15:32 PM 5

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET3.NCSS  
 Response II\_wo\_56

**Tukey-Kramer Multiple-Comparison Test**

Response: II\_wo\_56  
 Term B: Age

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.3347495 Critical Value=3.7218

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 5.482539 |                       |
| 2     | 86    | 5.485006 |                       |
| 3     | 54    | 5.59214  |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: II\_wo\_56  
 Term C: Gender

Alpha=0.025 Error Term=S(ABC) DF=194 MSE=0.3347495 Critical Value=3.2022

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 5.474893 |                       |
| 2     | 110   | 5.564897 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**APPENDIX J**

**POLITICAL SKILL ANALYSIS OUTPUT**



4/17/2014 2:23:00 PM 1

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response Political Skill

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(ABC)              | S+bcsA                  |
| B: Age         | 2   | Yes            | S(ABC)              | S+acsB                  |
| C: Gender      | 1   | Yes            | S(ABC)              | S+absC                  |
| BC             | 2   | Yes            | S(ABC)              | S+asBC                  |
| S(ABC)         | 195 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

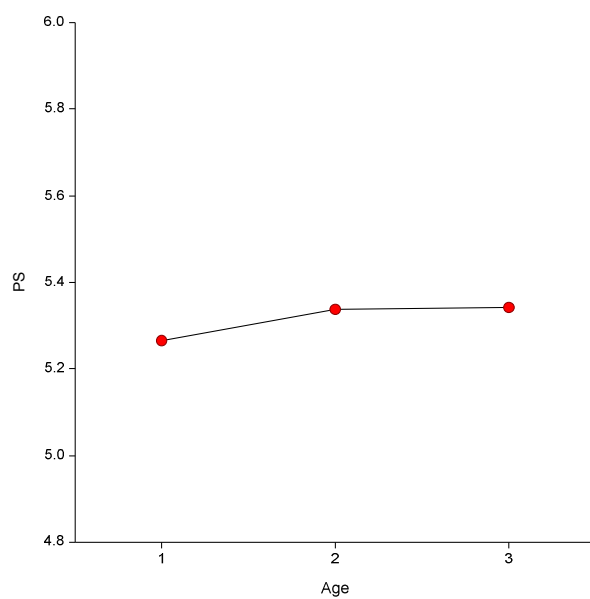
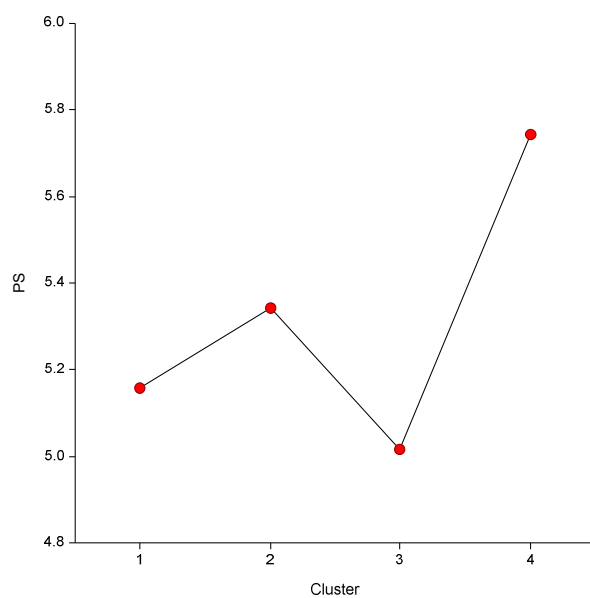
| Source<br>Term   | DF  | Sum of<br>Squares | Mean<br>Square | F-Ratio | Prob<br>Level | Power<br>(Alpha=0.05) |
|------------------|-----|-------------------|----------------|---------|---------------|-----------------------|
| A: Cluster       | 3   | 11.21233          | 3.737444       | 12.26   | 0.000000*     | 0.999719              |
| B: Age           | 2   | 0.1876963         | 0.09384816     | 0.31    | 0.735413      | 0.098489              |
| C: Gender        | 1   | 0.05515743        | 0.05515743     | 0.18    | 0.671063      | 0.070762              |
| BC               | 2   | 2.47215           | 1.236075       | 4.05    | 0.018834*     | 0.716665              |
| S                | 195 | 59.45401          | 0.3048923      |         |               |                       |
| Total (Adjusted) | 203 | 74.71526          |                |         |               |                       |
| Total            | 204 |                   |                |         |               |                       |

\* Term significant at alpha = 0.05

**Means and Standard Error Section**

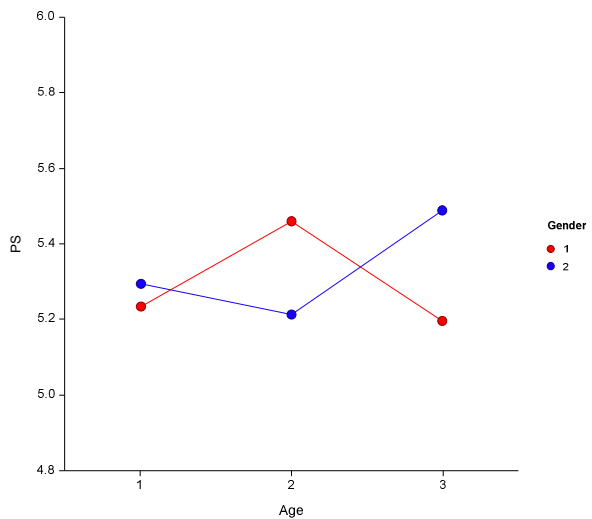
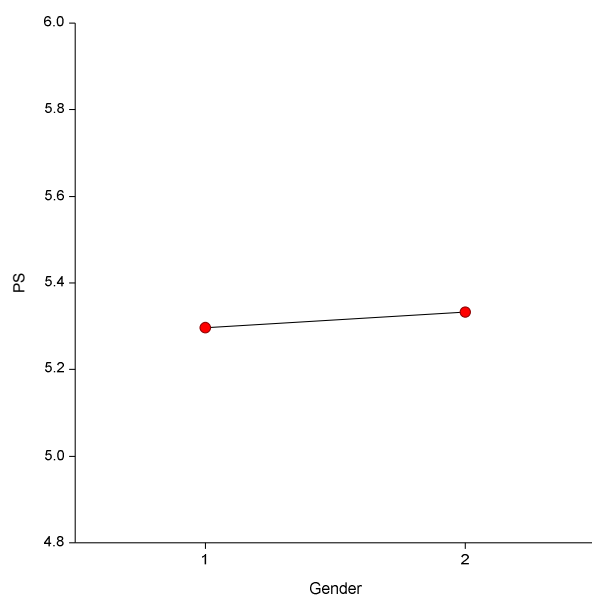
| Term           | Count | Mean     | Standard<br>Error |
|----------------|-------|----------|-------------------|
| All            | 204   | 5.314564 |                   |
| A: Cluster     |       |          |                   |
| 1              | 82    | 5.157691 | 0.06097704        |
| 2              | 43    | 5.342709 | 0.08420523        |
| 3              | 42    | 5.01565  | 0.08520177        |
| 4              | 37    | 5.742207 | 0.09077628        |
| B: Age         |       |          |                   |
| 1              | 63    | 5.264453 | 0.06956695        |
| 2              | 86    | 5.337124 | 0.05954208        |
| 3              | 55    | 5.342115 | 0.07445467        |
| C: Gender      |       |          |                   |
| 1              | 93    | 5.297343 | 0.05725742        |
| 2              | 111   | 5.331785 | 0.05240971        |
| BC: Age,Gender |       |          |                   |
| 1,1            | 27    | 5.23543  | 0.1062653         |
| 1,2            | 36    | 5.293476 | 0.09202842        |
| 2,1            | 36    | 5.460477 | 0.09202842        |
| 2,2            | 50    | 5.213772 | 0.07808871        |
| 3,1            | 30    | 5.196123 | 0.1008121         |
| 3,2            | 25    | 5.488108 | 0.1104341         |

4/17/2014 2:23:01 PM 2

**Analysis of Variance Report**Dataset  
ResponseC:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
PS**Plots Section**

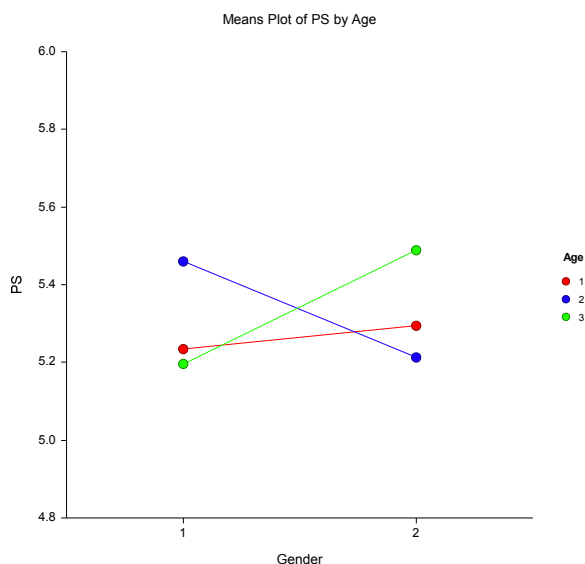
4/17/2014 2:23:01 PM 3

**Analysis of Variance Report**  
Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
PS



4/17/2014 2:23:01 PM 4

**Analysis of Variance Report**  
 Dataset Response C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 PS



### Tukey-Kramer Multiple-Comparison Test

Response: PS  
 Term A: Cluster

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.3048923 Critical Value=3.6714

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 82    | 5.157691 | 4                     |
| 2     | 43    | 5.342709 | 3, 4                  |
| 3     | 42    | 5.01565  | 2, 4                  |
| 4     | 37    | 5.742207 | 1, 2, 3               |

### Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Age

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.3048923 Critical Value=3.3475

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 63    | 5.264453 |                       |
| 2     | 86    | 5.337124 |                       |
| 3     | 55    | 5.342115 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term C: Gender

Alpha=0.050 Error Term=S(ABC) DF=195 MSE=0.3048923 Critical Value=2.7973

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 93    | 5.297343 |                       |
| 2     | 111   | 5.331785 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 1  
 Response PS

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 58 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 2.28318                            | 0.76106        | 5.54    | 0.002047*     | 0.840347 |
| B: Gender        | 1  | 0.01416645                         | 0.01416645     | 0.10    | 0.749184      | 0.022540 |
| S                | 58 | 7.962162                           | 0.1372786      |         |               |          |
| Total (Adjusted) | 62 | 10.80727                           |                |         |               |          |
| Total            | 63 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

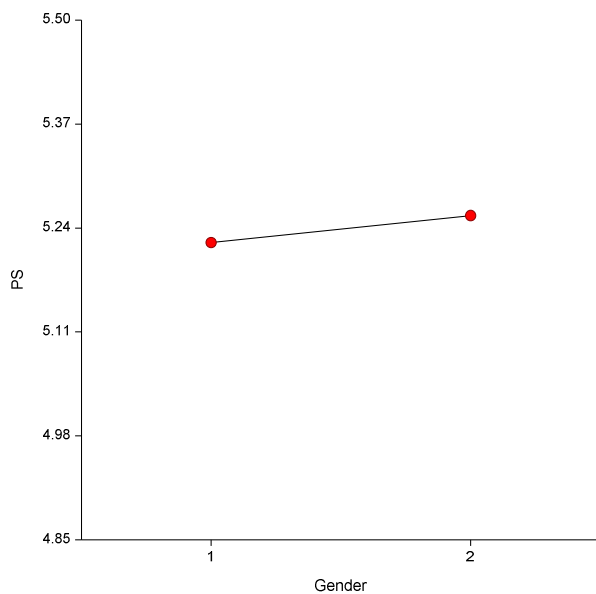
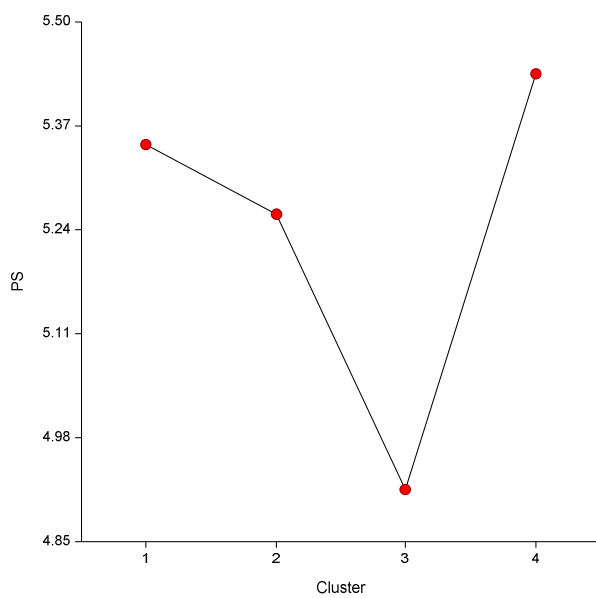
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 63    | 5.238812 |                   |
| A: Cluster |       |          |                   |
| 1          | 14    | 5.346124 | 0.09902332        |
| 2          | 16    | 5.259135 | 0.09262784        |
| 3          | 28    | 4.915415 | 0.07002006        |
| 4          | 5     | 5.434574 | 0.1656977         |
| B: Gender  |       |          |                   |
| 1          | 27    | 5.222361 | 0.07130494        |
| 2          | 36    | 5.255263 | 0.06175189        |

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**Analysis of Variance Report**

Dataset C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Age = 1  
Response PS

**Plots Section**

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 1  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.1372786 Critical Value=4.3306

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 14    | 5.346124 | 3                     |
| 2     | 16    | 5.259135 |                       |
| 3     | 28    | 4.915415 | 1                     |
| 4     | 5     | 5.434574 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=58 MSE=0.1372786 Critical Value=3.4811

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 5.222361 |                       |
| 2     | 36    | 5.255263 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.



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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 2  
 Response PS

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 81 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 7.588118                           | 2.529372       | 6.27    | 0.000699*     | 0.900770 |
| B: Gender        | 1  | 1.331053                           | 1.331053       | 3.30    | 0.072936      | 0.273706 |
| S                | 81 | 32.66119                           | 0.4032246      |         |               |          |
| Total (Adjusted) | 85 | 41.06291                           |                |         |               |          |
| Total            | 86 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

**Means and Standard Error Section**

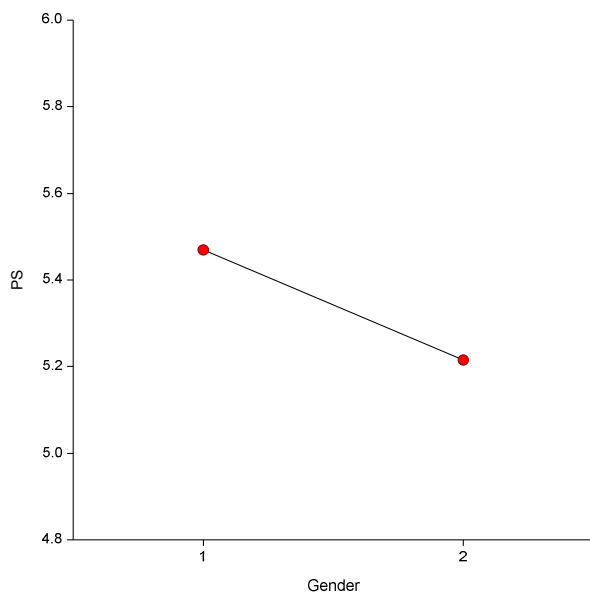
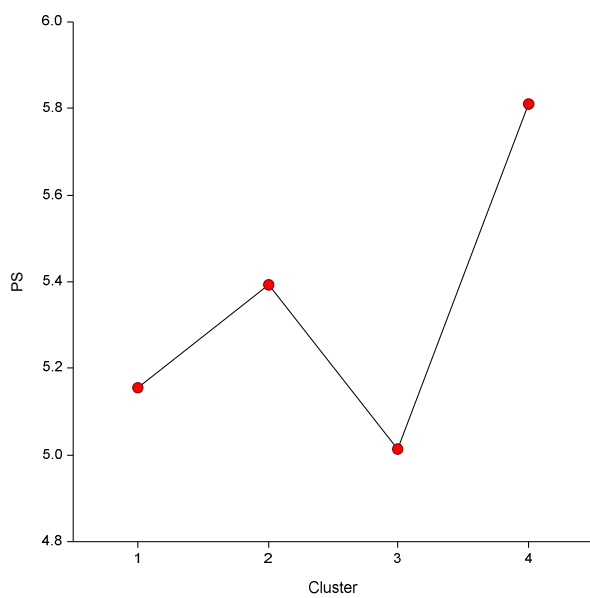
| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 86    | 5.343322 |                   |
| A: Cluster |       |          |                   |
| 1          | 42    | 5.154195 | 0.09798258        |
| 2          | 11    | 5.393216 | 0.1914596         |
| 3          | 10    | 5.014284 | 0.2008045         |
| 4          | 23    | 5.811592 | 0.1324066         |
| B: Gender  |       |          |                   |
| 1          | 36    | 5.470298 | 0.1058333         |
| 2          | 50    | 5.216345 | 0.08980251        |

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**Analysis of Variance Report**

Dataset  
Filter  
Response

C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Age = 2  
PS

**Plots Section**

4/22/2014 10:16:49 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 2  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=81 MSE=0.4032246 Critical Value=4.2823

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 42    | 5.154195 | 4                     |
| 2     | 11    | 5.393216 |                       |
| 3     | 10    | 5.014284 | 4                     |
| 4     | 23    | 5.811592 | 1, 3                  |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=81 MSE=0.4032246 Critical Value=3.4523

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 5.470298 |                       |
| 2     | 50    | 5.216345 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 3  
 Response PS

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Gender      | 1  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 50 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.017) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 3.440182                           | 1.146727       | 3.43    | 0.023972      | 0.571644 |
| B: Gender        | 1  | 0.9907305                          | 0.9907305      | 2.96    | 0.091496      | 0.237397 |
| S                | 50 | 16.7315                            | 0.3346301      |         |               |          |
| Total (Adjusted) | 54 | 21.47901                           |                |         |               |          |
| Total            | 55 |                                    |                |         |               |          |

\* Term significant at alpha = 0.017

**Means and Standard Error Section**

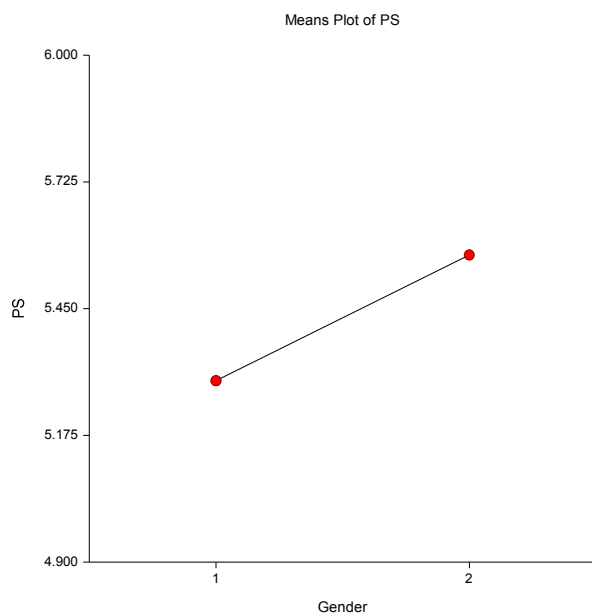
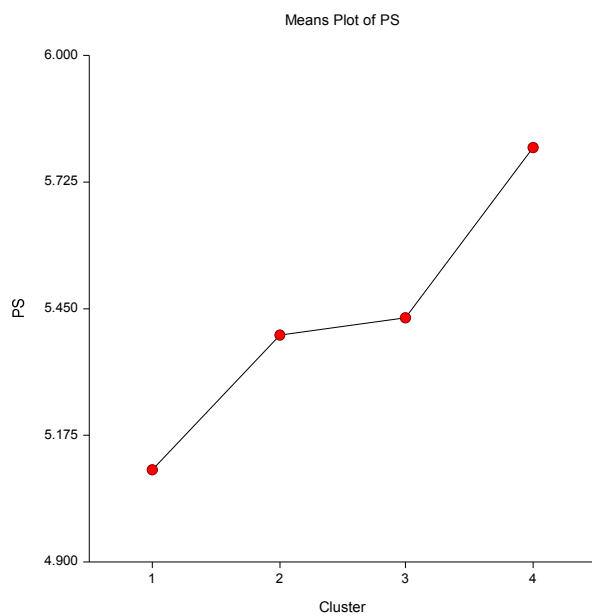
| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 55    | 5.430546 |                   |
| A: Cluster |       |          |                   |
| 1          | 26    | 5.099852 | 0.1134477         |
| 2          | 16    | 5.392673 | 0.144618          |
| 3          | 4     | 5.430555 | 0.2892361         |
| 4          | 9     | 5.799106 | 0.1928241         |
| B: Gender  |       |          |                   |
| 1          | 30    | 5.294151 | 0.1056141         |
| 2          | 25    | 5.566942 | 0.1156944         |

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**Analysis of Variance Report**

Dataset  
Filter  
Response

C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Age = 3  
PS

**Plots Section**

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Age = 3  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term A: Cluster

Alpha=0.017 Error Term=S(AB) DF=50 MSE=0.3346301 Critical Value=4.3582

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 26    | 5.099852 | 4                     |
| 2     | 16    | 5.392673 |                       |
| 3     | 4     | 5.430555 |                       |
| 4     | 9     | 5.799106 | 1                     |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Gender

Alpha=0.017 Error Term=S(AB) DF=50 MSE=0.3346301 Critical Value=3.4976

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 30    | 5.294151 |                       |
| 2     | 25    | 5.566942 |                       |

Notes:

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 1  
 Response PS

**Expected Mean Squares Section**

| Source<br>Term | DF | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|----|----------------|---------------------|-------------------------|
| A: Cluster     | 3  | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2  | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 87 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3  | 3.055918                           | 1.018639       | 3.40    | 0.021349*     | 0.648381 |
| B: Age           | 2  | 1.135716                           | 0.5678581      | 1.89    | 0.156571      | 0.279480 |
| S                | 87 | 26.0797                            | 0.2997667      |         |               |          |
| Total (Adjusted) | 92 | 31.85092                           |                |         |               |          |
| Total            | 93 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

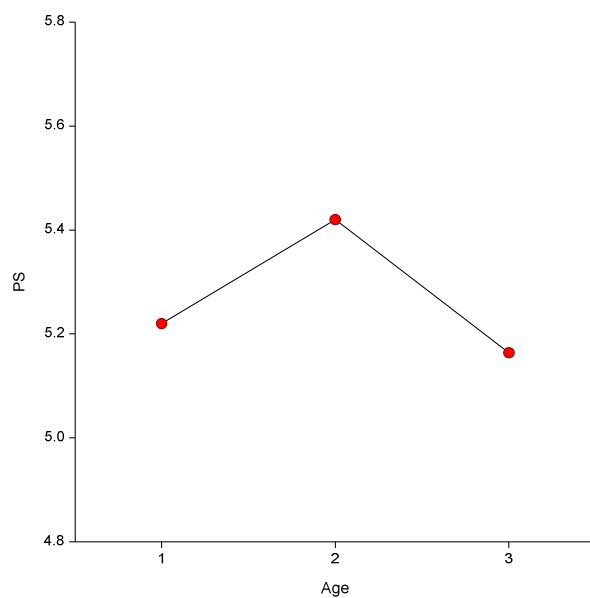
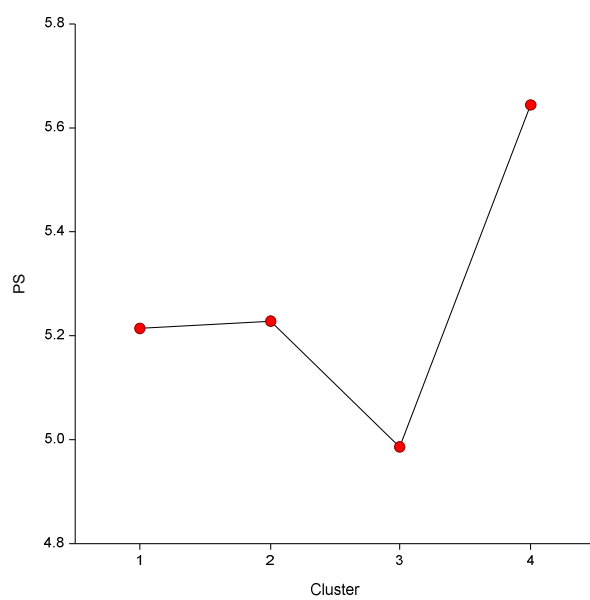
**Means and Standard Error Section**

| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 93    | 5.268558 |                   |
| A: Cluster |       |          |                   |
| 1          | 40    | 5.214926 | 0.08656885        |
| 2          | 15    | 5.228209 | 0.1413663         |
| 3          | 24    | 4.986805 | 0.1117599         |
| 4          | 14    | 5.644292 | 0.1463281         |
| B: Age     |       |          |                   |
| 1          | 27    | 5.220764 | 0.1053683         |
| 2          | 36    | 5.42036  | 0.09125159        |
| 3          | 30    | 5.16455  | 0.09996111        |

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Filter Gender = 1  
Response PS

**Plots Section**



4/22/2014 10:26:15 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 1  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.2997667 Critical Value=4.0819

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 40    | 5.214926 |                       |
| 2     | 15    | 5.228209 |                       |
| 3     | 24    | 4.986805 | 4                     |
| 4     | 14    | 5.644292 | 3                     |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=87 MSE=0.2997667 Critical Value=3.7657

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 27    | 5.220764 |                       |
| 2     | 36    | 5.42036  |                       |
| 3     | 30    | 5.16455  |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

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**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 2  
 Response PS

**Expected Mean Squares Section**

| Source<br>Term | DF  | Term<br>Fixed? | Denominator<br>Term | Expected<br>Mean Square |
|----------------|-----|----------------|---------------------|-------------------------|
| A: Cluster     | 3   | Yes            | S(AB)               | S+bsA                   |
| B: Age         | 2   | Yes            | S(AB)               | S+asB                   |
| S(AB)          | 105 | No             |                     | S                       |

Note: Expected Mean Squares are for the balanced cell-frequency case.

**Analysis of Variance Table**

| Source<br>Term   | DF  | Sum of<br>Squares<br>(Alpha=0.025) | Mean<br>Square | F-Ratio | Prob<br>Level | Power    |
|------------------|-----|------------------------------------|----------------|---------|---------------|----------|
| A: Cluster       | 3   | 8.9312                             | 2.977067       | 9.59    | 0.000012*     | 0.992580 |
| B: Age           | 2   | 1.153258                           | 0.5766289      | 1.86    | 0.161190      | 0.275743 |
| S                | 105 | 32.59952                           | 0.3104716      |         |               |          |
| Total (Adjusted) | 110 | 42.7106                            |                |         |               |          |
| Total            | 111 |                                    |                |         |               |          |

\* Term significant at alpha = 0.025

**Means and Standard Error Section**

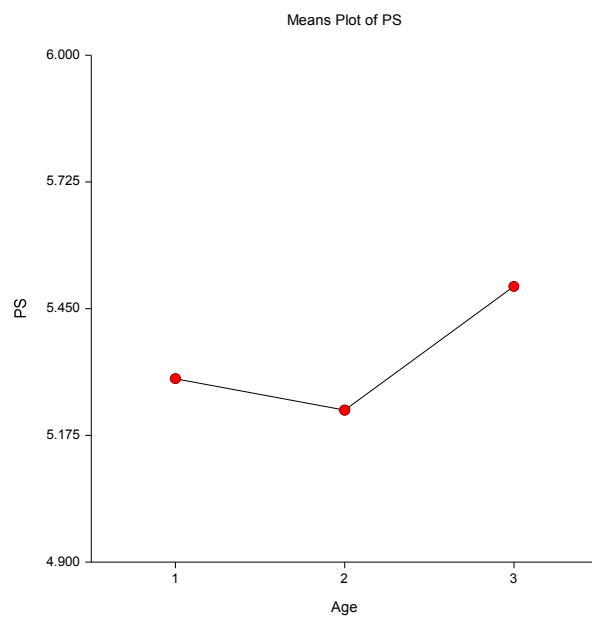
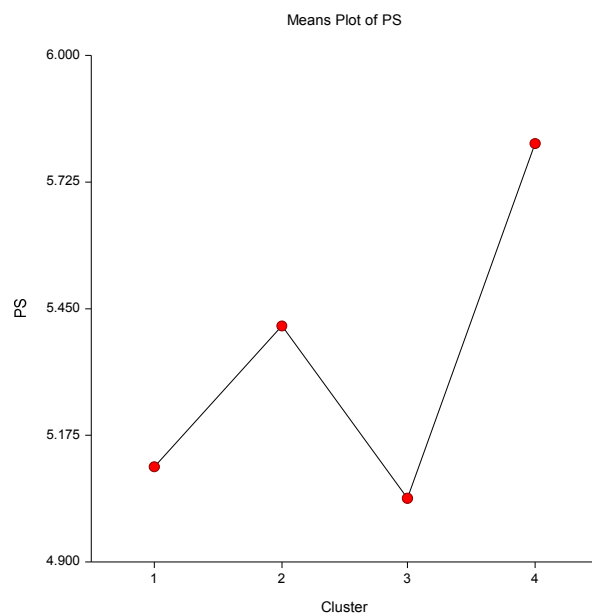
| Term       | Count | Mean     | Standard<br>Error |
|------------|-------|----------|-------------------|
| All        | 111   | 5.342063 |                   |
| A: Cluster |       |          |                   |
| 1          | 42    | 5.107204 | 0.08597779        |
| 2          | 28    | 5.413472 | 0.1053009         |
| 3          | 18    | 5.038297 | 0.1313332         |
| 4          | 23    | 5.809281 | 0.1161842         |
| B: Age     |       |          |                   |
| 1          | 36    | 5.297668 | 0.09286663        |
| 2          | 50    | 5.230739 | 0.07879995        |
| 3          | 25    | 5.497783 | 0.11144           |

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**Analysis of Variance Report**

Dataset  
Filter  
Response

C:\...\NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
Gender = 2  
PS

**Plots Section**

4/22/2014 10:27:01 AM 3

**Analysis of Variance Report**

Dataset C:\...NEW NCSS DATA\FINAL PSI - CORRECTED DATASET.NCSS  
 Filter Gender = 2  
 Response PS

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term A: Cluster

Alpha=0.025 Error Term=S(AB) DF=105 MSE=0.3104716 Critical Value=4.0653

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 42    | 5.107204 | 4                     |
| 2     | 28    | 5.413472 |                       |
| 3     | 18    | 5.038297 | 4                     |
| 4     | 23    | 5.809281 | 1, 3                  |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.

**Tukey-Kramer Multiple-Comparison Test**

Response: PS  
 Term B: Age

Alpha=0.025 Error Term=S(AB) DF=105 MSE=0.3104716 Critical Value=3.7519

| Group | Count | Mean     | Different From Groups |
|-------|-------|----------|-----------------------|
| 1     | 36    | 5.297668 |                       |
| 2     | 50    | 5.230739 |                       |
| 3     | 25    | 5.497783 |                       |

**Notes:**

This report provides multiple comparison tests for all pairwise differences between the means.